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Evolving Security Threats Create Challenges

How Attacks Are Transforming To Target Data

by Christian Perry

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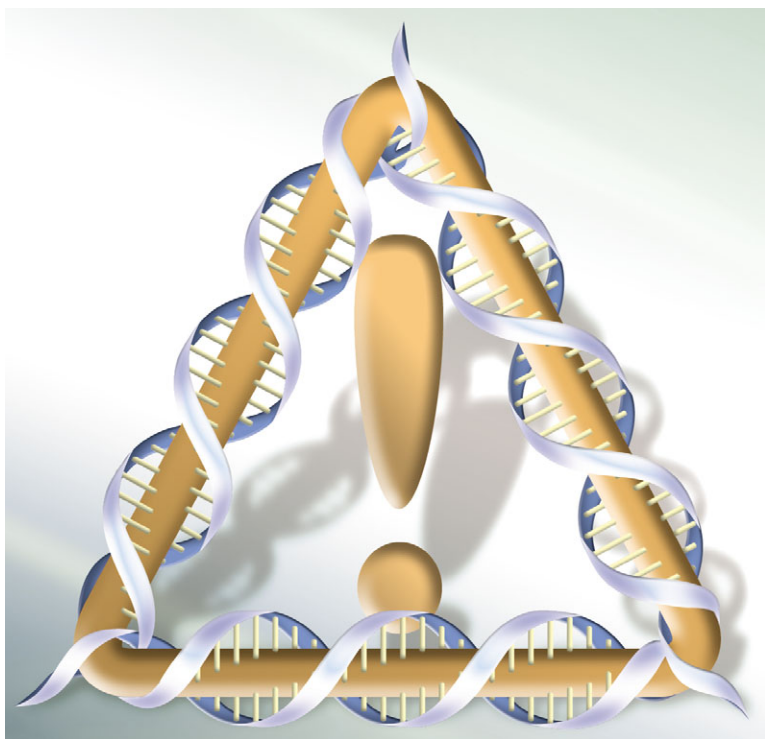
THAT SECURITY THREATS remain a top concern among data center managers comes as little surprise. What might surprise some, however, is that the threat landscape has been dramatically altered in recent years, such that the average worm proves nearly laughable compared to the more devious threats facing enterprises today.

"In 2007, I expect that we will see the current threat trends continue—namely the move by criminals away from large-scale cyber attacks in favor of more targeted attacks, with a specific focus on stealing confidential information for financial gain via identity theft and even extortion," says Ron O'Brien, senior security analyst with Sophos (www.Processor.com/Sophos1).

A recent report by Computer Economics (www.computereconomics.com) discovered that insider misuse and unauthorized access by insiders ranks as the highest security concern among IT professionals, with spam, malware, and unauthorized access by outsiders following closely behind. The report also noted that other concerns are somewhat prevalent, including physical loss or theft, electronic fraud, and denial of service attacks. While extortion ranked last in the study's list of security concerns, Computer Economics noted that enterprises are likely to underreport occurrences of extortion to avoid the inevitable publicity.



Threats Follow Data

Richard JB Campbell, founder and CEO of Securiant (www.securiant.com), says the top threats facing data centers today ultimately emerge from data convergence, flaws in authorized channels and business procedures, data in transit, and insider access. These occur not only within large enterprises but also in small to midsized

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Extended Life Expectancy

Regular Maintenance To Keep Your Data Center In Good Health

by Sandra Kay Miller

• • •

HOUSEKEEPING: IT'S A DIRTY WORD, but when it comes to the data center for small to midsized enterprises, passing the white glove test on a regular basis can mean the difference between useful and extended lifetimes for critical infrastructure, such as flooring, racks, UPSes, and HVAC systems.

Although professional maintenance service companies such as Media Recovery, Sterile Environment Technologies, and Data Clean warn against cutting corners by hiring a janitorial service to perform specialized data center maintenance that requires a certain level of expertise, there are a number of routine tasks that can be carried out by data center or facilities personnel that can significantly reduce maintenance costs while helping to extend the useful life of equipment.

Don't Swab The Deck

As easy as picking up a broom or mop may sound, this is one task best left to professionals, especially where there is raised flooring. Rich Hill, president of Data Clean, explains that keeping the data center floor surface clean is critical for maintaining conductive properties. "If the pores of the laminate become compromised, it decreases the conduction properties. Cleaning helps the floor do its job," he says.

Metal surfaces in the subflooring can slough zinc whiskers, leading to the failure of electronic equipment. Due to their small size, zinc whiskers can be easily jettisoned into the air during improper cleaning, causing even more damage.

Innocuous everyday household cleaners and floor treatments, such as wax, can severely damage floors in the data center, so unless your data center personnel have the proper equipment and training, caring for floors should be left to professionals.

To minimize floor cleaning, preventive measures, such as installing tacky step mats at entries, can greatly cut down on tracking dirt into the data center.

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As easy as picking up a broom may sound, this is one task best left to professionals.

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Electrical Redundancy | 25

Today's 24/7 demands on enterprise servers require that small to midsized enterprises have reliable electricity.

Product Releases | 16

■ **Catbird Security** announced Catbird V-Agent, a virtual appliance that is VMware-certified and can provide hacker protection to virtual networks. ■ **Motorola** launched the latest iteration of its Good Mobile Messaging software and service. ■ **Network Appliance** announced a new targeted ReplicatorX offering designed for large data centers running mixed storage environments. ■ **Palo Alto Networks** launched its first product, a next-generation firewall based on AppID application-classification technologies. ■ The new DXi7500 enterprise disk backup and replication system from **Quantum** is unique in that it also provides data deduplication, disk-to-tape, and remote replication features. ■ The new Sentry Modular Cabinet Power Distribution Unit lineup from **Server Technology** can split one or two three-phase inputs (208V, 30/60A or 400V, 32A) into single-phase power. ■ **SGI** announced the creation of the SGI Altix Ice, an energy-efficient, integrated blade solution that minimizes the demands on a data center's power and space. ■ **Untangle** launched the Untangle Gateway Platform, a commercial-grade open-source solution for blocking spam, spyware, viruses, adware, and unwanted content on the network.

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1. What is the size of your company (how many employees)?

- ☐ Less than 10
- ☐ 10 to 99
- ☐ 100 to 199
- ☐ 200 to 499
- ☐ 500 to 999
- ☐ 1,000+

2. How often do you purchase computer hardware/software?

- ☐ Weekly
- ☐ Bi-weekly
- ☐ Monthly
- ☐ Quarterly
- ☐ Annually
- ☐ No Involvement

3. What is your annual computer hardware/ software purchasing budget?

- ☐ $0 to $9,999
- ☐ $10,000 to $24,999
- ☐ $25,000 to $49,999
- ☐ $50,000 to $99,999
- ☐ $100,000 to $249,999
- ☐ $250,000 to $499,999
- ☐ $500,000 to $999,000
- ☐ $1,000,000+

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STORAGE JULY 13, 2007

Virtual RAID Cuts Cost, Boosts Performance

Pivot3 Enters The Market With An IP-based RAID Platform

START-UP PIVOT3 has entered the scalable network storage market with a "virtual distributed RAID" platform, which the company says can slash storage infrastructure costs by half while improving scalability and data availability.

The RAIGE (RAID Across Independent Gigabit Ethernet) storage cluster is the first system from Pivot3 based on a block-level virtualization architecture that eliminates

the need for traditional RAID hardware and storage controllers. Data-protected storage is supported across networked nodes, called Databanks, which are built using x86-based servers connected by Gigabit Ethernet.

"This is an alternative that not only can reduce cost up to 50% but can also provide five times or more the performance of traditional storage," says Jeffrey Bell, vice president of marketing for Pivot3.

The ability for RAIGE to simply and cost-effectively handle data-intensive application workloads has made it attractive to customers within the video surveillance space. Breaking into that market is requiring Pivot3 to work within the existing partner community, a practice the company is likely to continue to use as it targets additional markets.

"Businesses considering video surveillance are looking at cameras or video management software and are working with security integrators," Bell says. "We've been working with those types of providers to get the leverage we need in the market."

The platform is well-suited for apps requiring content aggregation, including use for medical records, oil and gas exploration, and archiving. The use of standard server platforms can allow a business to create a pay-as-you-grow model, adding drives as needed without disruption.

"Data recovery times are five to 10 times faster than other storage alternatives due to system-wide parallel processing and a Pivot3-created algorithm that optimizes the rebuild process," he says. Data is continuously made available through volume provisioning changes that support on-the-fly configuration changes.

Pivot3 RAIGE Storage Cluster

$17,499 for 6TB; $22,499 for 9TB

Storage cluster that uses block-level virtualization to reduce cost and improve performance

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www.Processor.com/RAIGE

Pivot3

NETWORK & SYSTEMS MANAGEMENT JULY 13, 2007

Monitoring Critical Infrastructure With ScienceLogic

View The Enterprise Through EM7 5.0's Customizable Dashboards

EM7 5.0, an appliance-based IT management tool from ScienceLogic, provides customizable dashboard tools for troubleshooting plus high-level and granular reporting for technical and business stakeholders who need to monitor critical infrastructure.

These dashboards are one of the EM7 5.0's strongest selling points. ScienceLogic aligns the product's dashboards with the needs of a variety of positions, giving an individual the ability to divine his own view into the SME. For example, data center and technical staff can have a NOC-like view of

only relevant network components and servers, while senior management seeking a dashboard view can glean high-level statistics on business IT performance.

In addition, technology managers can view statistics on IT department performance, including key application availability and system-wide CPU/memory usage, so they can best respond to the needs of the business. And for non-technical business managers, there is a real-time view of availability/status of IT infrastructure components supporting business applications and customizable business intelligence dashboards when tapping into the data mining functionality of EM7 Database Dynamic Applications.

Because monitoring databases is integral to maintaining the health of key systems, the EM7 5.0 also includes the EM7 Database Dynamic Application feature, enabling you to monitor critical information about your databases.

Performance monitoring is a necessity for many SMEs that have service-level agreements with internal and external customers, and the EM7 includes performance monitoring and diagnostic tools to help ensure service quality.

Other notable features include a preloaded, pretested, and preconfigured single data store for housing monitoring data. It provides optimal performance in the appliance and with all EM7 management applications. The data store is self-managing and self-healing, and ScienceLogic has already tuned the data store's performance.

ScienceLogic EM7 5.0

Starts at $25,000

An appliance-based IT management tool with customizable dashboards

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EM7™

STORAGE JULY 13, 2007

Mainframe Digital Archiving

Bus-Tech Collaboration Integrates With Hitachi Archiving

BUS-TECH HAS teamed with Hitachi to create an integrated platform for a mainframe tape-on-disk digital archiving platform, promising high density and fast data retrieval to meet requirements for business data growth.

The platform combines Hitachi's Content Archive Platform with Bus-Tech's MDL (mainframe data library) and MAS (mainframe appliance for storage) to create secure long-term preservation and retention of data with easy and fast access to specific stored information, says Jim O'Connor, director of product marketing for Bus-Tech.

"It's very scalable and has modest I/O requirements," he says. "The real beauty of the platform is that it's a monolithic approach. You can store a very large amount of data and still get at the information you need in subseconds, making it much more applicable to use with online applications like online banking or other ecommerce."

The Bus-Tech MDL and MAS are tape-on-disk appliances that attach to IBM zSeries mainframe I/O channels. The systems use GbE IP and Fibre Channel to attach to disk storage systems. The platform can virtualize up to 1,024 MDL or 256 MAS tape drives, which enables the mainframe-based applications to store data on the Hitachi archiving system by writing sequential files to disk as if they were standard tape devices.

"If you look at mainframe storage, it's been a pretty static technology over the past number of years," O'Connor says. "With the increase in restrictions and regulations imposed by agencies like the Securities and Exchange Commission such as Sarbanes-Oxley, however, there are now requirement to keep a lot of what was once thought of as fairly benign data for years."

This is Bus-Tech's first partnership with Hitachi, but the company has previously collaborated with EMC's Centera CAS (content-addressed storage) system and NetApp's SnapLock storage and software.

Mainframe digital archiving solution

Starts at $110,000

Fully integrated solution for mainframe tape-on-disk archive operations

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www.Processor.com/MAS
www.Processor.com/MDL

BUS-TECH INC.

APPLICATION MONITORING JULY 13, 2007

Silver Peak Software Upgraded

Version 2.0 Reaches New Heights For WAN Management

DISASTER RECOVERY, server centralization, and other strategic initiatives are increasing the amount of data on the WAN, resulting in a growing demand for high-capacity WAN connections. These larger WAN links have unique performance, scalability, and configuration challenges that must be taken into consideration by WAN acceleration devices to effectively improve application performance.

Silver Peak is focused on solving these high-end WAN optimization needs. Its newest software release (version 2.0) for its NX family of acceleration appliances and GMS (Global Management Software) introduces a variety of features that enable large enterprise to move more data across the WAN faster than ever before. This applies to all kinds of WAN traffic, from data replication, backup, SQL, and disaster recovery to file transfers, email, Web, VoIP, and video streaming.

At the heart of the Silver Peak solution is the company's data reduction technology, called Network Memory. The goal of Network Memory is to minimize WAN utilization and maximize application performance by eliminating the transfer of repetitive data across the WAN. This is done by inspecting all inbound and outbound WAN traffic in real time and storing this information on local hard drives. Real-time traffic streams are compared to patterns previously stored. If a match exists, a short reference pointer is sent to the remote Silver Peak appliance instructing it to deliver the traffic pattern from its local instance.

With version 2.0, Silver Peak has increased the pattern recognition capabilities within its Network Memory technology while improving the NX appliances' ability to read and write data to disk at very high speeds. This leads to better performance in high-throughput environments, such as data replication. The company also took measures to improve the configuration and management of large networks by employing intuitive templates with a variety of configuration options pertaining to QoS, security, and routing parameters. In addition, the company added the ability to apply specific optimization techniques on a per-application basis and introduced a new "zero touch" mode whereby all required policies are automatically downloaded to remote appliances with no manual intervention.

Silver Peak Systems NX Appliances

New software features increase performance on high-capacity WAN links while simplifying deployment in complex network environments

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www.Processor.com/SiverPeak-v2

Silver Peak

MarketPlace NEWS

Antitrust Judge Sides With Microsoft

Judge Colleen Kollar-Kotelly of the U.S. District Court for the District of Columbia has rejected a motion filed in court by Google regarding the antitrust case brought against Microsoft by the U.S. government. Google had requested that Kollar-Kotelly extend her oversight of changes to include desktop search, claiming that Microsoft's Windows Vista OS makes it hard for users to change the default desktop search. However, during a status hearing to address Microsoft's compliance with the settlement, she stated, "The plaintiffs, as far as I'm concerned, stand in the shoes of the consumer. Google is not a party in this case."

Senators Question L Visa Use

Sens. Chuck Grassley (R-Iowa) and Dick Durbin (D-Ill.) have questioned how offshore outsourcing vendors have been using H1-B visas, and now they are questioning whether some of those same companies are "abusing the system" in using L visas, a cousin of the H1-B. The L visas, including the L-1 type, have fewer restrictions, and global firms can use them to transfer workers from overseas sites to office locations in the United States. The senators released a list of the firms using the most L visas for 2006, and of the top 20 companies, 14 were offshore outsourcing companies. Grassley and Durbin are calling for more stringent provisions for issuing both the L and H1-B visas.

Oracle Shows Big Gains

Oracle's net income for the most recent quarter was up 23%, and revenues were up 20% compared to a year ago. The company had similarly good earnings for all of fiscal 2007, with increases in both revenue—up 25%—and net income, which was up 26%. Earnings per share were up 27%, to 31 cents a share, compared to a year ago. "It was a great year," says Oracle President and CFO Safra Catz. "If you have the right strategy and the best technology, it will show up in your results," she says. Oracle saw its fiscal 2007 new application license revenue increase 32%.

Intel To Cut Jobs

A chipmaking plant in Colorado Springs, Colo., will be the site of Intel's latest job cuts; the company plans to lay off 800 employees there. The announcement comes following Marvell Semiconductor choosing to purchase components from Taiwan Semiconductor Manufacturing and no longer using Intel as its supplier. In June of last year, Marvell paid $600 million for Intel's XScale communications chip division, and it now sells the chips it makes to vendors of smartphones, cell phones, and other electronics handsets. Marvell says its agreement with Intel was only intended to last through its transition of buying the division; however, Marvell will continue buying parts from other Intel facilities.

Gartner Advises Against iPhones In Businesses

Gartner says the Apple iPhone device has the potential to "punch a hole" in corporate security if employees are allowed to use the devices for business purposes. Among Gartner's concerns are the lack of support for mobile device management suites, security suites, and email providers; a limited number of available backup options for the OS platform; and increased support costs caused by feature deficiencies. Other concerns include the fact that the iPhone is only available through one operator in the United States and is being offered at a high price (starting at $500) by a company that has never created an enterprise-class mobile device.

BSA Increases Piracy Rewards

The Business Software Alliance will reward individuals up to $1 million if they can supply detailed information about software piracy at their workplace. The new incentive is five times the usual rate of up to $200,000 and will be offered through October 2007. The BSA started offering rewards in the fall of 2005 and has brought in about $22 million as a result of the rewards program. According to research firm IDC, software piracy cost businesses in the United States an estimated $7.3 billion last year; another independent study showed that about 21% of software used in the United States is unlicensed.

RIM Profit Beats Expectations

Research In Motion, makers of the popular BlackBerry device, says its profit and number of new BlackBerry subscribers increased more than expected during the most recent quarter. The company earned $223.2 million, or $1.17 a share, last quarter. Revenue was up 76.5% from last year, to $1.08 billion, with 76% of RIM's revenue coming from devices. About 1.2 million new BlackBerry subscribers signed up for service last quarter, above the expected 1.15 million forecast. RIM announced a three-for-one stock split and says it expects to ship its 20 millionth BlackBerry handset this summer.

Intel Quad-Core Shipments Reach Milestone

After rolling out its quad-core Xeon 5300 processors in November, Intel says it has now met the internal goal of shipping 1 million of the microprocessors. The company chose to offer the Xeon 5300 line at aggressive prices—even overlapping the Xeon 5100 series prices, in some cases—in an attempt to sell more of the processors. The 5300 line has played a major role in Intel winning back market share from Advanced Micro Devices and its Opteron chips. A spokesperson for Intel says the 1 millionth microprocessor was shipped earlier this month.

HP State Charges Dropped

In the HP scandal revolving around information leaks that led to pretexting, a state judge in California has dropped the charges against private investigators Matthew DePante and Ron DeLia and former HP attorney Kevin Hunsaker. In March, the same judge dismissed charges against HP's former chairman Patricia Dunn and said he would do the same for these three defendants, provided they fulfilled their community service requirements. The judge decided the defendants displayed a "betrayal of trust" but not criminal activity in using false pretenses to get phone records of the people they suspected were behind leaking board room deliberations to the media.

FTC Neutral On Net Neutrality

In a recent report regarding the Net neutrality issue being debated in Congress, the Federal Trade Commission didn't come out on either side of the issue, instead recommending that lawmakers proceed with caution. In the report, the FTC notes that because more competition is ahead in the broadband industry, new regulations should be enacted with caution in the absence of market failure. Companies such as Google and Qwest have issued statements supporting the FTC's findings, while organizations such as the Open Internet Coalition and SavetheInternet.com Coalition note that policymakers need to look ahead and make moves to preserve the open Internet.

HP & Microsoft Work On Supercomputers

HP and Microsoft will work together to give supercomputers more mass market appeal. As part of the joint effort, the companies plan to develop supercomputers that are easier for enterprise and midmarket customers to deploy, support, and manage. HP will sell Microsoft Windows CCS (Compute Cluster Server), which is designed to make it easier for users to easily expand their computing capabilities. CCS will be offered as part of HP's Unified Cluster Portfolio. The two companies are also creating technology centers in Houston and France for customers to benchmark and test HP servers running CCS.

Mobile Phone Use Up

According to a report by The Mobile World, by the end of the year, there will be more than 3.25 billion mobile phone subscriptions worldwide. And for the first time, that number will top the 3 billion mark by the end of this month. The survey revealed that around the world there are more than 1,000 new customers signing up for service every minute. Purchases in growing markets will account for the sale of 65% of all handsets made this year, according to forecasts.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 16 major companies in the technology market.

Company	Symbol	Year Ago	June 26 $	July 3 $	% change from previous week
Avaya	AV	$10.58	$16.82	$16.97	▲ 0.89%
BEA Systems	BEAS	$11.38	$13.15	$13.48	▲ 2.51%
Computer Associates	CA	$19.10	$25.63	$25.86	▲ 0.9%
Cisco Systems	CSCO	$17.97	$27.15	$28.10	▲ 3.5%
Dell	DELL	$21.57	$27.56	$28.71	▲ 4.17%
Electronic Data Systems	EDS	$22.60	$27.35	$28.12	▲ 2.82%
Google	GOOG	$407.89	$530.26	$534.34	▲ 0.77%
HP	HPQ	$31.20	$44.64	$45.58	▲ 2.11%
IBM	IBM	$73.70	$105.33	$106.58	▲ 1.19%
Intel	INTC	$17.84	$23.38	$24.59	▲ 5.18%
McAfee	MFE	$23	$34.81	$35.40	▲ 1.69%
Microsoft	MSFT	$22.48	$29.52	$30.02	▲ 1.69%
Oracle	ORCL	$14.42	$19.16	$20.07	▲ 4.75%
Red Hat Software	RHT	$23.27	$23.36	$21.83	▼ 6.55%
Sun Microsystems	SUNW	$3.88	$5.01	$5.22	▲ 4.19%
Symantec	SYMC	$15.22	$19.90	$19.88	▼ 0.1%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

Upcoming IT Events

- JULY -

SANSFIRE 2007
July 25-August 3
Washington, D.C.
www.sans.org

- AUGUST -

National Institute of Governmental Purchasing
August 4-8
Hartford, Conn.
www.nigp.org/Events/Forum.htm

LinuxWorld Conference & Expo
August 6-9
San Francisco, Calif.
www.linuxworldexpo.com

SHARE
August 12-17
San Diego, Calif.
www.share.org

Business & Technology Solutions Show
August 21-22
Rosemont, Ill.
www.btshow.org

Gartner Financial Services Technology Summit
August 27-29
New York, N.Y.
www.gartner.com/it/page.jsp?id=498092&tab=overview

Gartner Enterprise Planning & Architecture Strategies Seminar
August 28-29
New York, N.Y.
www.gartner.com/2_events/conferences/epas073.jsp

- SEPTEMBER -

Enterprise Architecture 2007
September 5-7
Washington, D.C.
events.fcw.com

InfoSecurity
September 11-12
New York, N.Y.
www.infosecurityevent.com

Data Center World Fall 2007
September 16-19
Dallas, Texas
www.datacenterworld.com

Gartner Business Process Management Summit
September 17-19
Orlando, Fla.
www.gartner.com/it/page.jsp?id=501307&tab=overview

Intel Developer Forum
September 18-20
San Francisco, Calif.
www.intel.com/idf

Gartner Open Source Summit
September 19-21
Las Vegas, N.V.
www.gartner.com/it/page.jsp?id=502444&tab=overview

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SIX QUICK TIPS

Data Center Monitoring Makes For A Smooth Landing

by Chris A. MacKinnon

• • •

IMAGINE YOUR DATA CENTER without any type of monitoring solution. Things would soon grind to a halt if you were not keeping an eye on performance issues. Peter T. Sacco, president of PTS Data Center Solutions (www.ptsdcs.com), says, "It is vital to develop and deploy a support infrastructure environmental monitoring system capable of monitoring the power and environmental conditions of each room, equipment row, and cabinet."

Sacco says the most effective monitoring solutions are those that enable capturing of data over time such that trend analysis can be performed to make proactive decisions about IT infrastructure changes that may be necessary. Here are a few tips that go hand-in-hand with Sacco's advice on data center monitoring.

"It is vital to develop and deploy a support infrastructure environmental monitoring system capable of monitoring the power and environmental conditions of each room, equipment row, and cabinet."

- PTS Data Center Solutions' Peter T. Sacco

Device Identity

Getting down to basics, Dave Cole, president of The Advantage Group (www.taglim.com), says you should identify the devices you want to monitor before choosing a solution. Cole says, "What do you want to monitor? This is the first thing I ask our customers to think about before they consider a solution because it directly impacts the type of monitoring solution required. Will you require support for devices that use different protocols (SNMP, Modbus, or BACnet, for example)? If so, you need to choose a solution that will support all of these protocols."

The Enclosure Level

Herb Villa, field technical manager at Rittal (www.Processor.com/Rittal), says any size organization will already monitor key network and computing performance parameters. "But these same organizations," Villa says, "may say they can see what is going on in their space, but that is only a large-scale view and does not go down to the enclosures, where it is critical to see what is happening."

Villa says the following enclosure parameters should be monitored: "Certainly temperature and humidity. Perhaps smoke detection and water or leak detection. Depending on how secure an installation location is, enclosure access control could be considered. And there may be a need to pull information from other facility systems including fire suppression and UPS to let a user know if those systems are in an alarm condition. Power usage at the enclosure level should also be monitored. Intelligent power strips provide these capabilities with both local amp readouts as well as remote monitoring capability."

Villa says important items to consider include a location to send the information and your type of OS environment. He says enclosure and power monitoring systems should communicate over existing network infrastructure.

According to Villa, organizations may not have the luxury of a large, dedicated IT department, so systems should be easy to install, easy to set up, and easy to manage. "I would look for plug-and-play capability to add on additional sensors and monitoring components, as well as software that provides auto detect and update."

Access To Historical Data

Chris Knowles, solutions architect for Uptime Software (www.Processor.com/Uptime-Software), says it is important to have open access to historical data. Knowles notes, "The monitoring station should have configurable data retention parameters for the metrics that are collected from the monitored elements and services. This data should be accessible through open and easy standards or APIs, such as ODBC/JDBC or Web services. These metrics can be very valuable when integrated with external (to the monitoring station) data sets such as a corporate data warehouse."

As an example, Knowles says online campaign stats and key performance indicators can be correlated to stats from a Web server farm that supports the campaign. "This allows the IT department to directly measure the impact of campaigns against their resource utilization to ensure adequate capacity for future campaigns. This holds true for most any measurable business activity and the IT infrastructure that supports it."

Hardware Or Software?

According to Cole, a software solution will talk directly to a device using its native protocol, while a hardware solution generally uses some type of hardware to act as a protocol converter. Cole says when choosing between a software or hardware solution, consider the whole cost.

"The drawback to the hardware solution," Cole notes, "is that you may need hundreds of converters to talk to all of your devices. Remember that each hardware converter will need to be plugged in and should be backed up by a UPS. As your data center grows, you will need to add new converters as you add new devices."

But most importantly, Cole says a systems monitoring solution should span all areas within an IT organization. He says, "All areas of IT are interdependent upon one another; therefore, it is important that a monitoring solution monitor and report on the components within each silo in order to be able to report on the big picture. The tools should be able to provide a bird's eye view of the entire IT environment and allow the user to drill down to an individual component and the services supported regardless of the silo it resides within." Cole says software should have the ability to combine the interdependencies of individual system components to create a more holistic application service level view.

Best Return On Investment: The Right Fit

Uptime Software's Chris Knowles also suggests asking yourself the following:

- Will the new tool let me consolidate any existing tools and the associated management processes?
- Will the tool be able to grow with my environment in regards to platforms and functionality?
- Will I end up having to acquire new tools as I grow?
- Is the tool easy to implement, or will I need to train my staff?
- Will the tool benefit any existing processes within my operation that will improve time to response and resolution of problems?
- Will the tool span across the silos of my IT environment?
- Is the tool simple enough that the next person can step in and go, or is it based on one person's unique coding?

Easiest To Implement: Instant Value

Chris Knowles with Uptime Software (www.Processor.com/Uptime-Software) says software should provide a "zero time to value" implementation proposition. The software and its associated agents should provide value with no additional configuration. A novice user should be able to use the tool productively with little guidance or training.

Effective systems monitoring tools provide service monitors that let administrators monitor, alert, and report on the status of their applications with minimal configuration. For in-house apps, the software should allow for the creation of custom monitors that seamlessly extend the functionality of the software to monitors through a noncomplex development exercise. Your custom apps are often the bread and butter, and there won't likely be an off-the-shelf monitor for the metrics of relevance from your app.

Bonus Two

Watch for proprietary solutions. The Advantage Group's (www.taglim.com) Dave Cole says to watch out for proprietary solutions that will only work with a particular manufacturer's equipment. He notes, "Unless your data center only uses equipment from a single manufacturer, a proprietary solution will not provide the level of monitoring you need to get the job done. Improve your efficiency and control costs by investing in a scalable solution that will work with all of your hardware."

Beware of networking hurdles. Knowles says having little or no networking hurdles also comes in handy when monitoring the data center. He says today's IP-based networks are often segmented by firewalls and ACLs to ensure application and data security. He adds, "The software being implemented should not require a complex change in firewall rules for the monitoring station to be able to communicate with the monitored elements and their associated agents. A good solution will require a single TCP port to be open between the monitoring station and the agent."

COMPONENTS

MAY 25, 2007

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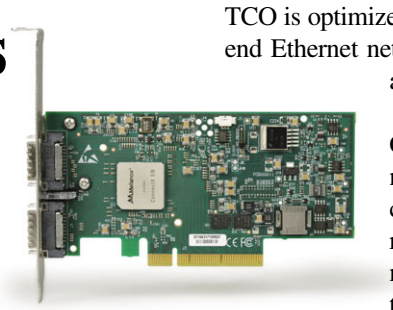

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NETWORK & SYSTEMS MANAGEMENT

JULY 13, 2007

Integrate With Windows Desktops

Hummingbird Suite Offers Levels Of Connectivity

RIDING HERD ON today's networks, with multiple systems competing for attention, is like herding cats. However, a new cowboy in town will help SMEs round up network integration challenges.

Hummingbird Connectivity 2008 is a software suite from Open Text designed to help SMEs integrate heterogeneous systems, including Unix and mainframe, with Windows desktops.

"Implementing Connectivity 2008 in SMEs is simple and straightforward, largely due to our support of the Microsoft Windows Installer technologies," says Robert Wong, senior product manager. As a Windows Vista-certified solution, all solutions in Connectivity 2008 support 32- and 64-bit natively.

Each solution in the suite is priced separately. Exceed PowerSuite 2008 tops the line, with X Window, OpenGL support, HostExplorer 2008, NFS Maestro Client 2008, and a collection of TCP/IP utilities.

"Aside from the standard method of installation, our Connectivity solutions can be silently deployed through SMS. They come with an integrated Windows Installer package customizer, which allows IT administrators to granularly control the software deployment to fit various business scenarios," Wong notes. Enterprises with a Citrix infrastructure benefit from the built-in seamless support found in the suite.

Wong says Hummingbird Connectivity, a division of Open Text, has supported tens of thousands of customers since 1989. "We partnered with Microsoft as an early adopter of the Windows Vista certification program, and we are the first Connectivity Suite in the industry to have received the Certified for Windows Vista logo for our latest Connectivity product offerings," he says.

SSL and Kerberos come standard with the suite. Secure Shell 2 is available to ensure X Window and terminal traffic are encrypted. NFS protocol relies on both Kerberos and LIPKEY for authentication and encryption. Wong says the FIPS 140-2 standard led to the development of the Hummingbird Cryptographic module, which is currently under review by the National Institute of Standards and Technology for certification.

The suite's Exceed 2008 supports X11R7.2, the latest X Window System release. All products in the suite offer 64-bit support.

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SECURITY

JUNE 29, 2007

10GbE Intrusion Prevention

McAfee's New Platform For Businesses Moving To Next-Gen Networks

MANY ENTERPRISES have either already transitioned to 10 Gigabit Ethernet platforms or have plans to upgrade infrastructure soon, and security specialist McAfee has made the move a bit easier with the introduction of its first network IPS (intrusion prevention system) appliances to provide up to 10Gbps performance.

McAfee also introduced IntruShield 4.1, the latest release of its intrusion prevention software, which provides enhanced integration with other products in McAfee's SRM (security risk management) portfolio.

"As organizations move to the next-generation 10 Gigabit Ethernet or IPv6 networks, this kind of protection will be critical for them," says John Vecchi, director of product marketing for McAfee. "Many businesses have really struggled to provide adequate protection as the performance in those environments has skyrocketed."

The 10GbE IntruShield platform is believed to be the first to offer 10Gbps performance, Vecchi says. The IntruShield appliance has 16 ports, eight 10/100/1000 ports and eight 10GbE ports, providing the highest gigabit port-density in the market.

The new appliance will provide greater visibility and more relevant data that can be utilized to create a "risk-aware" network intrusion prevention platform, he says, allowing IT and data center managers to make the right decision on network security and act quickly on any problems detected.

The platform has up to 4 million concurrent connections, adaptive rate limiting, dynamic network access control, and built-in, real-time host quarantine. The 10GbE appliance will be available in the second half of this year, with pricing competitive with existing IPS platforms, Vecchi says.

Available as a free download for existing IntruShield customers is version 4.1. The release is designed to better integrate with other products in McAfee's SRM portfolio, including Foundstone, NAC (Network Access Control), and ePO (ePolicy Orchestrator). Closer integration enables enterprises to create a "knowledge-driven" security platform that is automated and enables

network security teams to increase their effectiveness and efficiency, he says.

By integrating IntruShield with Foundstone, a user can get "scan now" functionality that provides real-time threat analysis and details on potential vulnerabilities. Integration with ePO provides visibility into host details, including attacks on the IPS and spyware events with one click.

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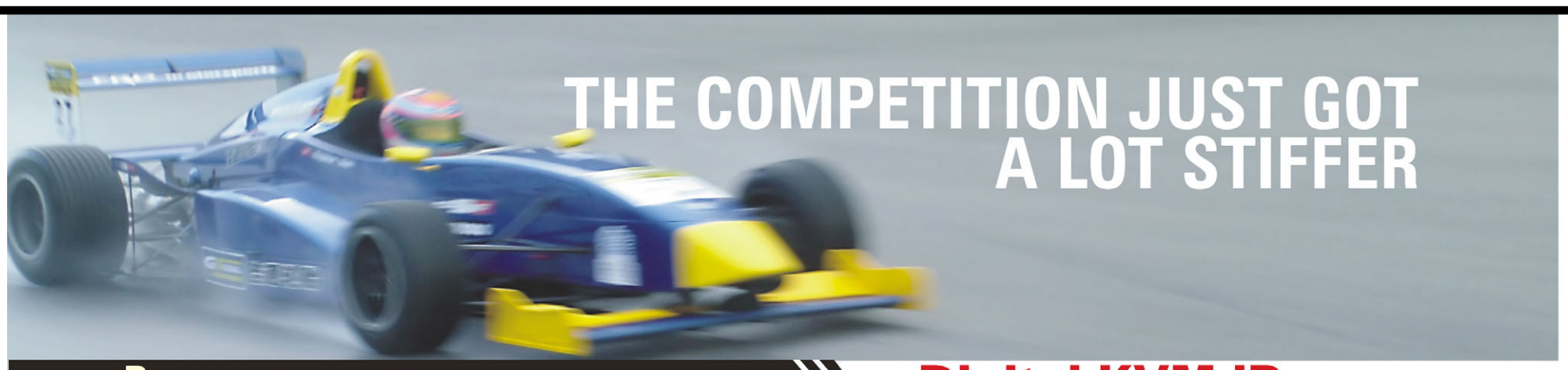

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The Risk From An Inside Job

Protecting Your Enterprise From The Latest Insider Threat

by Elizabeth Millard

• • •

One of the greatest threats to IT security within an organization might not be the hackers and virus writers loose in the world but the people in the cubicles and offices down the hall.

It's not that every enterprise is filled with disgruntled employees or mischievous, tech-savvy interns; instead, it's often carelessness or lack of rules that might cause threats. An employee might put a Post-it Note with his password inside a laptop bag, which he then inadvertently leaves in a cab. Or he could email a sensitive document without realizing what it contains. Even at large, seemingly well-protected companies, incidents occur that are the result of insiders.

"It's nearly inevitable," says George Tehrani, director of strategic relationships at Apani Networks (www.Processor.com/Apani). "You pick up security reports and read horror stories, and you never think they'll happen to you." Recently, Tehrani got a letter from his former employer, IBM, noting that his Social Security number may have been compromised because of careless handling of an HR file.

"Think of it as a cholesterol problem," Tehrani notes. "It doesn't matter if you're rich, poor, in California or New York, it hits everyone. In the same way, insider threats can be just as real at a small bakery as they can be at a large enterprise, and everything in-between."

Multilayered Approach

Similar to lowering cholesterol numbers through diet, exercise, and medication, fighting insider problems requires a multilayered approach that brings together access control, policy creation, HR cooperation, and content filtering.

"If you talk to different security vendors, they like to shine a light on what they're doing specifically," says Tehrani. "But the best approach is probably to implement a little bit of everything."

One challenge that tends to crop up is interoperability, he admits. If there are a few hundred, or even a thousand, applications that are targeted for protection through perimeter security VPNs, digital certificates, and encryption, it can be tricky to make sure all the pieces work together, but using just a few vendors that play well together can be useful, Tehrani notes.

Policy & Access

One of the most important tools in fighting insider threats is to articulate specifically how a company PC can be used, especially for telecommuters and business travelers.

Studies from McAfee (www.Processor.com/MFE) have noted that more than 20% of employees let family and friends use company laptops to access the Internet, and more than half connect their own devices to the computer. The security firm also noted that 10% of employees admitted that they downloaded content they knew they shouldn't, and more than half said they had no idea how to update the antivirus protection on their company machine. Particularly striking was that 5% confessed that they accessed areas of the IT system that they shouldn't have.

Those statistics show that there's a blend of user oblivion, security ignorance, and willful disregard for the rules. Policies that state expectations and give specific examples can be helpful. For example, instead of writing that laptops "shouldn't be used for personal activities," it's far clearer to an employee to read that laptops "are not to be used by family, friends, or others outside the company," as well as banning downloads of personal software, creation of personal documents, and use with personal devices such as iPods or digital cameras.

Policies can help to shape a discussion if directions are ignored, but for real protection, it usually comes down to access control, says Faizel Lakhani, vice president of marketing at Reconnex (www.Processor.com/Reconnex), a maker of information protection technologies. "First and foremost, educate your users, who sometimes don't know what they're doing," he says. "But then take a look at what's happening in terms of access and control, and you'll get an education yourself."

He notes that Reconnex works with a few hundred organizations, and in every single case, there has been an IT director moment of "Oh my God, what's that?" in reference to information flowing in or out of a company. Creating a more comprehensive, multitiered access strategy can help prevent those unpleasant revelations.

Tool Kit

In addition, a number of software tools are available that various vendors developed with insider threats in mind. Most give IT departments the ability to determine the rules that govern their system, so they can be tweaked according to specific company policies.

Reconnex has a service called Data in Use that analyzes content being moved on all channels of communication, such as printers, USB devices, and Bluetooth-enabled gadgets.

At Apani Networks, EpiForce lets IT departments implement, enforce, and audit network security for every system and apply unique access privileges for users defined by application, database, network, or other relationships. Another vendor is Sentrigo (www.sentrigo.com), with an app called Hedgehog that combats data breaches caused by insiders by monitoring transactions, databases, and network management.

No matter what tools you use, the basic message is constant vigilance and awareness that the biggest threats may not be out in the world, but in the office. Fortunately, much like cholesterol levels, some prevention and treatment can go a long way.

Combating Security Threats

Security Threat	What To Do
Potential digital miscreants among the new hires	Coordinate with HR to conduct background checks on all new users.
Potential attackers in consulting firms or others granted access to the network	Conduct background checks on those consultants who will have higher-level access, and for others such as temps, interns, or visitors, give very restricted access.
Personal gadgets being connected to company PC	Be specific in usage policies and create automatic antivirus screening for any device that attempts to tap into the network or is connected to a company-owned machine.
IT finds it difficult to strike a balance between trusting employees and providing stricter access	Institute regular enterprise-wide risk assessments in order to get a clearer view of vulnerability areas.
Employees seem unaware of good security practices	Create periodic, mandatory security awareness training for all employees and make the presentation lively, non-threatening, and discussion-provoking.

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The SATABeast can scale up to 305TB in a single rack (up to 42 SATA drives in a 4U chassis). It includes single or dual-redundant RAID controllers with FC and iSCSI connectivity, up to 2GB cache per controller, two redundant power supplies, and support for multiple RAID sets and volumes per set.

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Evolving Security Threats Create Challenges

Continued from Page 1

enterprises that either house their own data centers or colocate them externally.

"With the power of the network and how networking technologies are leveraged today, wide sets of data are brought together and housed in databases which reside in the data center," Campbell says. "This includes passwords, email, voicemail, etc. With so much data converging and being stored on the same platform and in one place, a lot more harm can be unleashed if the data [or] data center is compromised."

When compromised, data naturally stands to be lost, and it's this potential for loss—whether through malicious or other means—that represents the biggest threat to data centers today, says Mark Campbell, product marketing manager at PGP (www.pgp.com). "Loss of data, regardless of intent, automatically triggers legal breach notification requirements in the case of unprotected information," he says. "Such incidents also raise doubt about the organization's ability to protect sensitive customer information and intellectual property."

The 12 Top IT Threats

In a report titled "Trends in IT Security Threats: 2007," Computer Economics analyzed the 12 primary categories of computer security threats. The threats include:

Malware: Infection of the organization's systems or network by viruses, worms, Trojans, adware, or spyware

Phishing: Impersonation of the organization through email or electronic means in an attempt to obtain confidential information

Pharming: Diversion of Internet traffic to an imposter site by means of DNS poisoning or browser address bar attack in an attempt to obtain confidential information

Spam: Unsolicited or unwanted email messages

Denial-of-service: Attempts to overwhelm or overload the organization's network or system resources with the intent to degrade their performance or make them unavailable

Unauthorized access by outsiders: Unauthorized access or use of systems or the network by outsiders

Vandalism/sabotage: Defacement, destruction, or other damage to the organization's systems, network, or Web site

Extortion: Demands for money or other concessions based on threats to use electronic means to harm the organization's network, systems, or reputations

Fraudulent transactions: Fraudulent electronic transactions that result in financial loss or damage to the organization or its customers

Physical loss: Physical loss or theft of computer, storage media, or other devices and any associated data

Unauthorized access by insiders: Successful access by insiders to system functions or information for which they are not authorized

Insider misuse: Violation of the organization's policies regarding acceptable use of computing/network resources

SOURCE: COMPUTER ECONOMICS, 2007

Increasingly, threats spawn from holes in existing channels that were previously considered secure. Securiant's Campbell says, "As thieves are focusing less on technology and more on compromising existing authorized channels, today's security technology is, for the most part, reactive and therefore only part of the solution."

Danger Inside

Those same authorized channels that can be compromised by outsiders also can be used by insiders to gain access to sensitive data. As technology grants employees ever more powerful and flexible methods to access company data, the temptation continues to rise for employees to take advantage of that data for their own criminal gain.

"It's the same old story: In espionage, it's much harder to plant a spy within a company or government agency than it is to find someone who is weak and turn them into a mole, with or without their knowledge and cooperation," Securiant's Campbell says. "It's always much simpler to leverage trusted, authorized users to compromise systems."

In many cases, insiders aren't necessarily acting with malicious intent, but their sloppy actions invite criminal behavior. "The insider channel is the most important threat channel today," O'Brien says. "This may consist of deliberate misuse of resources, unauthorized access, or even accidental misuse. Poorly protected PCs and insecure behavior by end users—such as responding to spam and Web-based threats—expose those PCs to the risk of infection, allowing the PCs to come under the control of criminals."

Industry research, according to PGP's Campbell, shows that internal documents and spreadsheets represent the largest sources of data leakage. Further, employees unfamiliar with security procedures are apt to compromise data. For example, Campbell points to the recent Veterans Affairs data loss, in which a data analyst at the agency took home a laptop containing unencrypted information on 26.5 million people. The laptop was subsequently stolen during a burglary of the analyst's home.

From All Angles

While today's threat landscape looks far different from that of years past, tried-and-true threats such as viruses, worms, and Trojans remain. But these, too, have evolved over the years to circumvent similarly evolving detection techniques.

"Malicious software authors today are attempting to use malware in a more covert manner as a means to evade detection," O'Brien says. "Traditional malware, such as viruses and worms, are now outnumbered by Trojans, which aim to take control of a PC. Also, as corporations deploy more security tools—like firewalls and authentication—to protect certain aspects of the data center, then the threats move to newer and less-protected aspects, in particular compromising endpoint PCs as a channel into the data center."

Although we now rarely see widespread worm attacks similar to those that regularly seized headlines years ago, enterprises remain at heavy risk. Security experts tend to agree that while many companies put forth valiant efforts to secure their data, the sheer number and efficiency of today's threats mean that these same companies will never be truly secure.

"I think the bad guys can shoot us any time they want," says Roger Thompson, CTO of Exploit Prevention Labs (www.explabs.com). "The only reason we're not seeing big outbreaks anymore is that it's counterproductive to them. They can't manage a huge number of [owned] machines. They don't want to cut down the apple tree, [but] just shake it every now and then and pick up the fruit that falls off."

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Extended Life Expectancy

Continued from Page 1

Lightweight Maintenance

Keeping the dust at bay on racks and electronics can be delegated to in-house staff as long as they are properly equipped. Vacuum cleaners should be industrial versions with HEPA filters; all cloths for wiping down surfaces should be antistatic microfiber towels; and cleaning solvents should be approved, such as EnviroTek, a zero-residue cleaner available through Sterile Environment Technologies.

As much as good cleaning techniques can minimize recirculating dust into the air, having clean filters within the HVAC system will also help the data center operate with better efficiency. Because regular HVAC maintenance is imperative to a data center, regardless of size, filters are commonly cleaned and changed by HVAC technicians. However, if your data center is subjected to an inordinate amount of dust (such as those in dry, arid environments, near construction, or in industrial settings) ask your HVAC technician to show in-house personnel how to properly change filters. Bear in mind, though, that some service-level agreements prohibit this.

In Case Of Emergency

Overlooking routine maintenance on emergency systems is unfortunately all too common. Dedicating time to regularly check on backup and environmental monitoring systems can mean the difference between minutes and days of downtime in the event of an emergency. Much of the monitoring and some of the maintenance can be performed in-house.

The first line of defense in a simple power outage or fluctuation is the UPS. Most UPS systems have a simple light installed on the panel for quick visual inspection as to the status of the battery. Some even emit a high-pitched chirping sound, much like a home smoke detector, when the unit is no longer functional.

Standalone UPS units designed for individual racks, servers, or workstations contain sealed lead-acid batteries, which have a three- to five-year lifespan. Although changing batteries is a simple process that can be completed in-house, keep in mind that batteries cannot be disposed of through a trash service where they could end up in a landfill and instead must be properly recycled.

Along the same line as UPSes, onsite generators need to be regularly monitored to verify fuel availability. With the dramatic increase in fuel prices, many facilities are falling victim to fuel theft from their emergency generators. Fuel reserves should be regularly checked to ensure the generator will be operational when a need occurs. After such an event, data center personnel can also be responsible for refueling.

A fire extinguisher may hang on the wall for decades but never be used. That doesn't mean it should also be ignored. Larger data centers often install comprehensive automated fire suppression systems, but many smaller enterprises are equipped only with smoke alarms and manual extinguishers.

Similar to monitoring UPSes, in-house personnel can be designated to visually inspect smoke detectors and fire extinguishers. Smoke detectors requiring batteries should have them replaced once a year. Likewise, extinguishers should be monitored to ensure the pressure is at the recommended level, can be accessed easily, and is free from any physical damage such as rust, dents, or leaks. In the event an extinguisher is discharged, even briefly, it should be inspected and recharged by a professional.

For data centers that want to take on the responsibilities of maintaining as much infrastructure as possible, they should first identify what facets they can perform themselves and what needs to be delegated to professionals. Next, set a schedule as to the frequency that maintenance should be performed. And, finally, only assign tasks to personnel trained or capable of handling the maintenance.

Despite the trend to outsource as much data center maintenance as possible, smaller enterprises often do not have the budget to provide for all routine maintenance to be done by professionals. By taking the time and initiative to perform simpler maintenance tasks, data centers can both save money and ensure a longer useful life of equipment.

When To Call In A Pro

While there is plenty of data center maintenance that can be performed in-house, there are also jobs that should be outsourced to professionals.

Do It Yourself	Call In A Pro
UPS maintenance and battery replacement	Raised and subfloor cleaning and repairs
HVAC filter replacement (unless prohibited by a service-level agreement)	Measuring air quality
Rack and cabinet cleaning	Zinc whisker remediation
Fuel for backup generators	Fire suppression system maintenance

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Data center cleaning services include subfloor cleaning, repair, and antistatic sealing; catalog available for tacky step mats, cleaning chemicals, and equipment

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Cruel World Out There

Protect Your SME From Outsider Threats

by Ericka Chickowski

• • •

In the past year or so, the trendy security focus has been on insider threats. And while it may be that some organizations turn a blind eye to the risks inside their organization, they shouldn't turn all of their security efforts inward. There is still a clear and present danger from threats coming from the outside that small to midsized enterprises must address.

The threat landscape has shifted considerably since the time of worm scares and script kiddies. Today's hackers are part of an underground economy fueled by data theft. The Russian mafia and other organized networks are using hacking techniques to raid corporate and consumer systems of personally identifiable information to create massive stores of credit card numbers, Social Security numbers, and the like to perpetuate a stream of identity thefts. These criminals often take over unprotected systems and add these zombie machines to their expansive bot networks that can carry out illicit activities under the radar of information security groups and law enforcement.

"The underground economy isn't new by any means, but there is an established order now," says Alfred Hager, vice president of engineering for Symantec Security Response (www.Processor.com/SymantecCorp). "It's like a market economy. It's very varied, and it's highly organized."

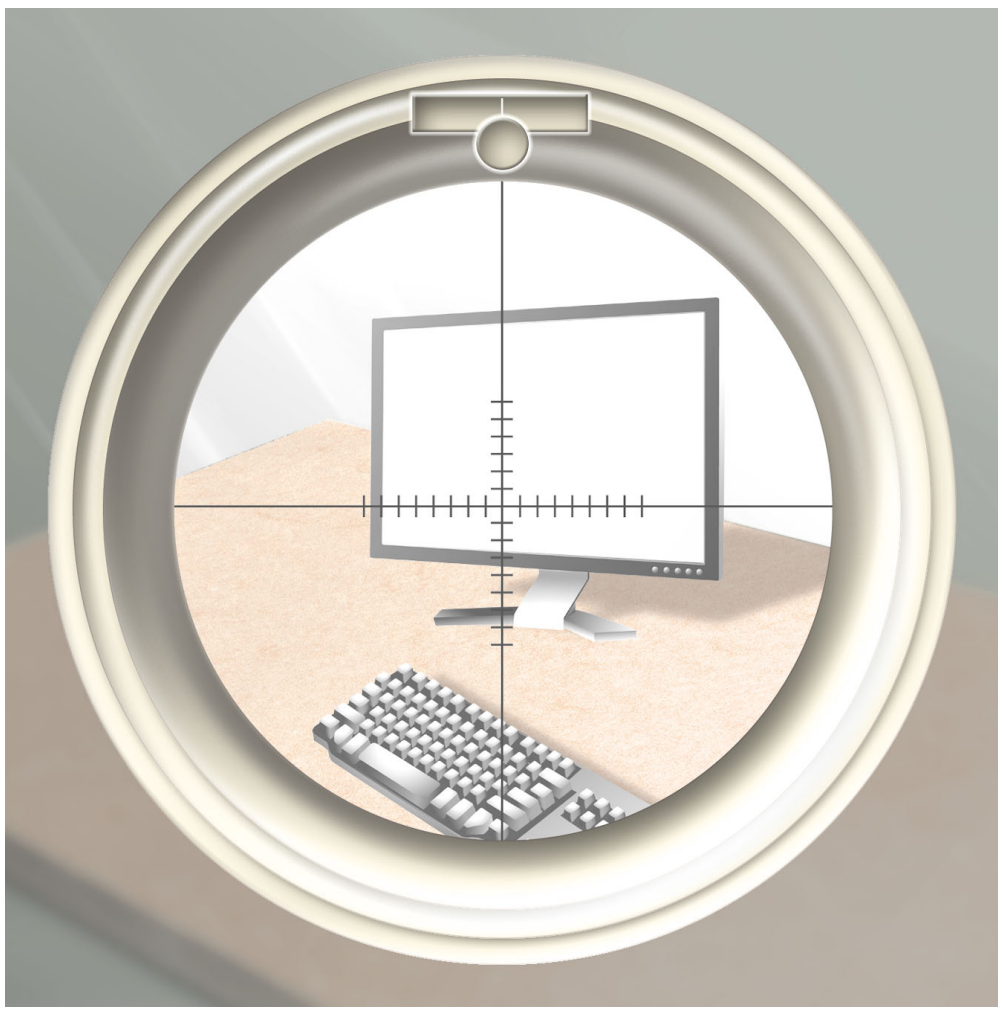
A recent report by Hager's team at Symantec pointed out that this criminal activity has matured to the point that there is a full-blown supply chain for those who wish to steal identities. Hackers on the ground level harvest identifiable information and act as stolen data "vendors" for those who wish to buy it. The next group of customers buys the data wholesale and processes and sifts through it to link credit card numbers, addresses, and the like to have all of the necessary information right in front of them. This group then sells this processed information to those who wish to take the risk to do the dirty work.

The illicit market has stabilized, so now there is even a standardized price for an identity: Symantec reports that the average price of an identity package, including a Social Security number, bank account information, name, date of birth, and credit card information, is between $14 and $16.

As businesspeople, these hackers are constantly on the lookout for better ways to carry out their work. This should scare the typical IT worker because the easiest way for these criminals to build their businesses is to target legitimate businesses.

Businesses often have large repositories of juicy information ripe for theft, such as customer lists, partner information, and employee information. Many times these data stores are not protected, and the hackers know this. Their goal is to steal as much information as possible without being detected. As a result, IT administrators now must look for sneakier attacks. This is in contrast to the splashy attacks of yesteryear that were designed simply to knock out company systems.

The following are some of the biggest outside threats SMEs should be addressing.



Zero-Day Threats

One of the ways many hackers are able to stay ahead of security protections is to target vulnerabilities in software that the vendor has not yet addressed or even found and attack these weaknesses to gain access to systems. Until the vendor is able to provide a patch or even warn its customers about these "zero-day vulnerabilities," the user is at risk.

"The increasing proliferation of zero-day vulnerabilities means the previous window of opportunity IT had to secure networks between the release of a software patch and an attack has been slammed shut," says Marc Maiffret, eEye Digital's (www.Processor.com/eEyeDigital) founder and CTO. "More zero-day security vulnerabilities and attacks are being discovered every day, and dealing with them can easily dominate an enterprise's IT efforts."

Many zero-day vulnerabilities can be mitigated before a patch is available by changing network or system settings and configurations. The trick is having the intelligence in time to make these changes before being attacked. This is why it is critical for SMEs to find some source of actionable intelligence to protect themselves from these attacks. Organizations such as eEye Digital, Symantec, and VeriSign's iDefense Labs (www.Processor.com/Veri) provide a range of products and services designed to protect against such attacks.

Stealthy Blended Attacks

According to a recent survey conducted by the security firm Webroot (www.Processor.com/Webroot-Co), more than 40% of companies worldwide reported business disruptions due to malware. The study also found 39% of companies reported Trojan horse attacks, 24% reported system monitor attacks, and 20% reported pharming and keylogger attacks. In addition, 26% of businesses reported that confidential information was compromised as a result of spyware.

The major difficulty SMEs have today is that malware creators are making these malicious programs increasingly difficult to detect, and they are combining different types of malware to create very effective blended attacks. As a result, SMEs must use a range of anti-malware programs to protect themselves. The defensive arsenal should include antivirus, antispyware, and rootkit detection. Vendors in this arena include Trend Micro (www.Processor.com/TrendMicro), Webroot, McAfee (www.Processor.com/MFE), and Symantec.

Web Application Attacks

One of the most dangerous risks in the IT environment is created by the IT team itself. In-house programs are becoming the attack vector du jour as hackers begin to see how easy it is to bypass home-brewed applications through buffer overflow, cross-site scripting, and similar attacks in order to gain access to an enterprise's systems.

One of the most popular groups of programs in-house programming teams create is the Web application, often used to create portals to certain data stores for customers, employees, or partners to access the information they need through the Web. Unfortunately, if these programs are built without security from the outset, they also provide an easy way for hackers to gain access to the same information and maybe even more.

"The use of Web-based applications forces us to essentially poke holes in the perimeter for information flow from our Web applications to our customers in back, so the whole concept of a perimeter starts to get a little fuzzy. At the same time, threat trend data began suggesting that those that are interested in unauthorized access in the network are looking for vulnerabilities elsewhere—and the most likely targets are Web applications," says Jim Routh, chief information security officer for financial firm DTCC (Depository Trust and Clearing Corp.). "This is where a host of vulnerabilities is likely to exist because from an industry perspective, we didn't put a whole lot of thought into things like buffer overflows and cross-site scripting, and we also made the assumption we could keep people out of our networks."

Routh believes the only way to address this risk is to train programmers how to code securely and to provide them with the right tools to scan their code for security problems before bringing programs into a production environment. Security coding products include SPI Dynamics' WebInspect (www.spidynamics.com), Watchfire AppScan (www.Processor.com/Watchfire), and Fortify Software's Source Code Analysis (www.fortify.com).

Old-Fashioned Threats

Don't forget hackers use other ways to obtain information. One is to physically get their hands on it. According to Symantec, the primary cause of data breaches that could facilitate identity theft was the theft or loss of a computer or other medium on which the data was stored or transmitted. SMEs should remember that a sound mobile device policy combined with the use of encryption can go a long way toward preventing theft of laptops and devices and preventing access to information once a theft occurs.

The major difficulty SMEs have today is that malware creators are making these malicious programs increasingly difficult to detect.

Outsider Security Threats

Security Threat	What To Do
Zero-Day Attacks	Find a source of information about zero-day vulnerabilities to apply third-party patches or reconfigure systems to mitigate the risk until an official patch is available.
Sneaky Blended Attacks	Employ a layered system of anti-malware protections that block a whole host of attacks.
Web Application Attacks	Train programmers in security and provide them with the right code scanning utilities.
Old-Fashioned Attacks	Encrypt laptops and create mobile device policies that lessen the risk of loss or theft of devices.

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Trend Micro InterScan Gateway Appliance
This secure content management appliance delivers all-in-one, comprehensive protection against security threats at the Internet gateway, before they can damage your network
www.Processor.com/InterScan

Dealing With Phishing, Pharming & Spam

How Can Your SME Fight Back?

by Robyn Weisman

• • •

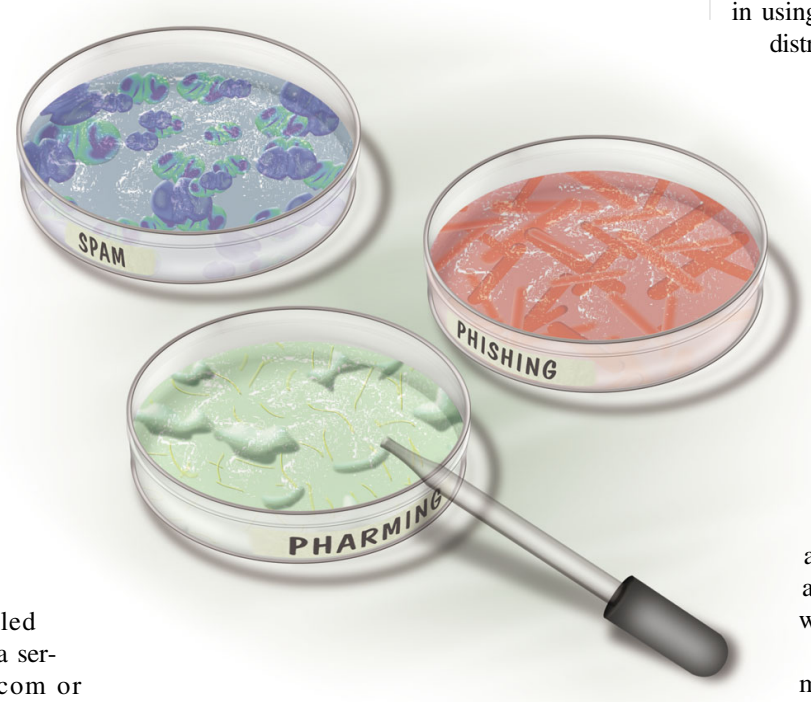
SPAM HAS BEEN AROUND for so long that the average IT manager frequently forgets that the name was coined for a processed meat product that is celebrating its 70th anniversary. Phishing has been a fact of online life for a while now, as well, while pharming is another cute term for another online exploitation tactic, says Andrew Jaquith, program manager of security research at The Yankee Group.

Despite the advances made in filters, security appliances, and the like, miscreants seem to be able to keep a step or two ahead of security product developers. "The primary reason is that these types of threats are driven by monetary gain," says Chris Simmons, director of product management at security appliance manufacturer Fortinet (www.Processor.com/Fortinet-Inc). "The techniques the 'bad guys' use, particularly social engineering, have not fundamentally changed but have simply become more focused in attempts to deceive recipients into believing the message is legitimate."

Like Chocolate & Peanut Butter

Over the last year or two, spamming and phishing have become increasingly intertwined, says Jaquith. Unlike the spam of his "youth," today's spam has become increasingly customized—so much so that an end user might receive a spoof email that is seemingly from someone he knows and trusts that asks him to click a link to see a new product or Web site, Jaquith says.

Jaquith says the so-called bad guys can subscribe to a service such as ZoomInfo.com or another business information search engine for a relatively small fee and see how users are linked to one another. The emails pass through normal spam filters and appear to come from trusted sources, when in fact these emails are designed to get users to go to phishing sites, where they either inadvertently download malware that attacks their computer and infects other PCs or log in confidential information, such as passwords.



If you think that this can't happen to you, Jaquith points to several high-profile cases of seemingly legitimate Web sites being hijacked, including phishing emails that were purportedly from the Better Business Bureau and the Web site for the Miami Dolphins stadium, the site of this year's Super Bowl, during Super Bowl weekend.

Improving Security Tools

When asked what Fortinet is doing to improve the effectiveness of its security tools, Simmons says that research is key. "We have a large staff of security researchers devoted to understanding new threat techniques and their inner workings. They then turn that knowledge into protection capabilities in our security products," he explains.

This research has led to Fortinet's FortiGate multithreat security solutions for protection against multiple and blended threats, be they malware or a network-based vulnerability. Meanwhile, the company's FortiMail email security device acts as a front-end message transfer agent to relieve other email infrastructures' workload, in transparent mode to install with minimal changes to the environment. "It can even act as the mail server for organizations who do not currently have an email infrastructure," Simmons says.

According to Simmons, a multipronged approach that includes network perimeter, network core, network-access layer, and endpoint security products offers the highest level of protection for larger small to mid-sized enterprises. For smaller organizations, perimeter and endpoint security should be the primary focus areas, Simmons adds.

Like Chocolate & Peanut Butter (Part 2)

Independent industry analyst Blane Warrene has spent nearly 20 years designing and maintaining networks primarily for financial services companies, and he believes in using hardware at the network level and distributing compatible security software at the end-user device level. "Don't forget to protect mobile devices in your scenario, as that is often a weak link."

Warrene's personal favorites for network-level security hardware include devices manufactured by Sophos (www.Processor.com/Sophos1), SonicWall (www.Processor.com/SonicWALL), and Barracuda Networks (www.Processor.com/Barracuda) because they provide multilevel protection against threats and support remote-access users. Moreover, they come with management software.

For end-user computers and mobile devices, Warrene says software from Sophos and F-Secure (www.Processor.com/FSecure) is particularly effective. At the same time, Warrene does point out that options are available for outsourcing email altogether. Such options include those from Live Office (www.liveoffice.com), Microsoft Hosted Exchange (www.microsoft.com), and AppRiver (www.Processor.com/AppRiver).

"We have a few hundred users in the field and have outsourced the email service for those folks, including spam and A/V filtering, data storage, and data backup," Warrene says. "There are vendors that eat, sleep, and breathe malware prevention. I am sure they know better than I how to secure our mail servers optimally."

Finally, Yankee Group analyst Jaquith says the emergence of new technology for the Web offers users visual feedback about whether a given Web site or page is legitimate. For example, Microsoft's Internet Explorer 7 and Mozilla Firefox 2 each include antiphishing toolbars that glow green when a vendor has an extended validation certificate and red when it doesn't. P

Phishing, Pharming & Spam Security Threats

Social engineering is one means attackers use to successfully pull off spam, phishing, and pharming attacks. Blane Warrene, an independent industry analyst, says that these "schemes are what keeps a lot of the profit to the 'bad guys' flowing. We have to continuously stream education on how to avoid and evade threats that end up in our staff and customer's inboxes." In addition to educating users, here are some other ideas for what actions you can take when faced with security threats.

Security Threat	What To Do
Phishing	Check all links provided in emails. If you access a given Web site regularly, make sure you type the address directly to ensure you are going to a legitimate Web site, says Warrene.
Pharming	"Antivirus, IPS [intrusion prevention systems], and Web filtering are all useful security technologies for combating pharming," says Fortinet's (www.Processor.com/Fortinet-Inc) Chris Simmons. "Antivirus software will detect malware payloads. IPS can detect cross-site scripting and other attempts to redirect traffic. And Web filtering will be able to block known malicious sites so the user doesn't enter their personal information."
Spam	Warrene recommends good spam filtering at the mail gateway level with additional filtering available to end users. "Train end users to carefully choose what e-newsletters they subscribe to and scrutinize the privacy and opt-out policies of Web sites they give their email address to."

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PHYSICAL INFRASTRUCTURE

MAY 25, 2007

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Aperture Releases A Software Add-on To Measure Consumption & Forecast Needs

DATA CENTER MANAGERS have their work cut out for them when it comes to planning for requirements in floor space, rack space, power, and cooling. The amount of time required to acquire new capacity for a data center can be excessive, and therefore planning is crucial for preventing outages and continuing to deliver services without overburdening existing resources.

Capacity management and planning is important to organizations because of the potential for saving money by increasing the efficiency of their operations. If there is too much capacity available to the data center, expenditures and maintenance will be too high. If there is not enough capacity to the data center, outages may occur and downtime can result, which is also costly. Not having enough capacity can also delay the implementation of new systems and cause schedule problems or failure to meet service level agreements.

Aperture, which specializes in software for managing data centers' physical infrastructure, has released a new software plug-in for its VISTA product, which is a complete data center infrastructure resource management system. Data center managers can now take a proactive stance toward capacity planning because the software gives them the ability to forecast the needs of the data center well in advance.

By taking advantage of the usage forecasting capabilities of the VISTA software, users can also save money by avoiding hazards such as the need for temporary solutions to capacity shortages (leasing space at another facility, for instance). They can forecast when key data center resources will run out, so they can plan ahead and minimize or prevent disruptions. In addition to forecasting future needs based on historical usage, users also have the ability to model planned projects and see their potential impact on existing infrastructure. Users can also allocate capacity within the data center to configurable units for budgeting purposes, which gives an added degree of flexibility.

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JUNE 8, 2007

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MetaGeek's new Chanalyzer 2.1 software offers improved graphics and more powerful controls.

Wi-Spy is the world's smallest 2.4GHz spectrum analyzer. It's so small (and inexpensive) because it harnesses the processing power of the computer you already own. Wi-Spy is perfect for troubleshooting interference from many devices, including Wi-Fi (802.11b/g/n), microwave ovens, cordless phones, and other Zigbee and Bluetooth devices.

With the addition of a reverse-polarity SMA adapter, Wi-Spy 2.4x offers the additional functionality and accuracy of adding an external antenna. The Wi-Spy 2.4x ships with a powerful little antenna, but it's a snap to add any RP-SMA-compatible antenna you choose.

MetaGeek's new Chanalyzer 2.1 software features improved graphics; powerful new play-through controls; and an even friendlier user interface that presents a more clear and concise view of your wireless landscape. Chanalyzer 2.1 supports both the original Wi-Spy and Wi-Spy 2.4x.

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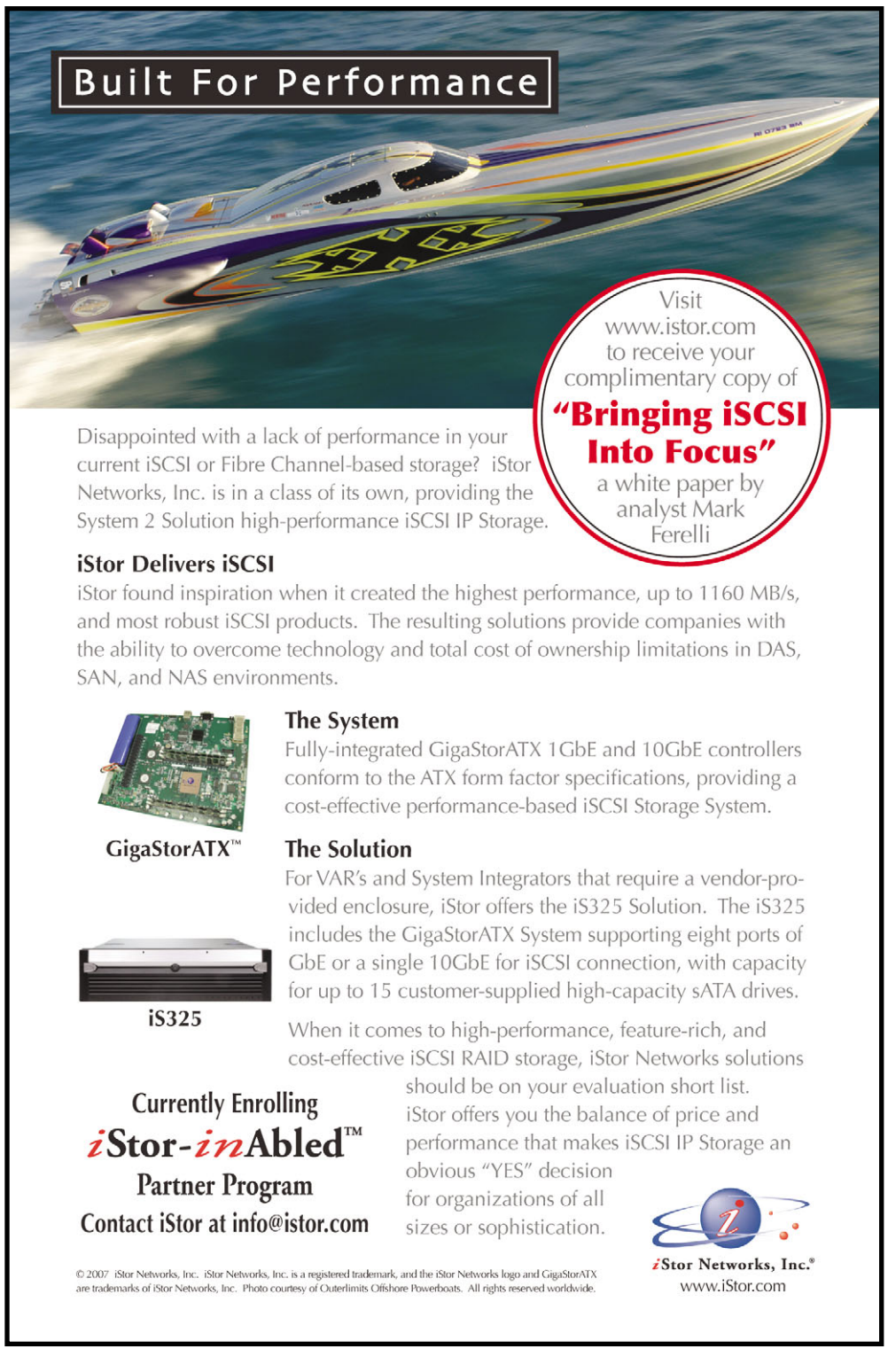

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Disappointed with a lack of performance in your current iSCSI or Fibre Channel-based storage? iStor Networks, Inc. is in a class of its own, providing the System 2 Solution high-performance iSCSI IP Storage.

iStor Delivers iSCSI

iStor found inspiration when it created the highest performance, up to 1160 MB/s, and most robust iSCSI products. The resulting solutions provide companies with the ability to overcome technology and total cost of ownership limitations in DAS, SAN, and NAS environments.

GigaStorATX™

The System

Fully-integrated GigaStorATX 1GbE and 10GbE controllers conform to the ATX form factor specifications, providing a cost-effective performance-based iSCSI Storage System.

iS325

The Solution

For VAR's and System Integrators that require a vendor-provided enclosure, iStor offers the iS325 Solution. The iS325 includes the GigaStorATX System supporting eight ports of GbE or a single 10GbE for iSCSI connection, with capacity for up to 15 customer-supplied high-capacity sATA drives.

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RACKS & FURNITURE

JULY 6, 2007

Network Infrastructure Survival

CPI's N-Series TeraFrame™ Network Cabinet Designed To Meet Cisco's Third-Party Specifications For 6500 & 9500 Switches

THE N-SERIES TERAFRAME™ Network Cabinet from Chatsworth Products Inc. (CPI) is engineered to solve thermal challenges associated with network switches using side-to-side airflow in a hot aisle/cold aisle layout. By employing CPI Passive Cooling™ Solutions, the N-Series TeraFrame serves as a complete and cost-effective solution for high-density applications, involving no active components to increase energy and maintenance costs or compromise redundancy, while decreasing total cost of ownership.

When deploying switches with side-to-side airflow, the N-Series TeraFrame can be equipped with CPI's Network Switch Exhaust Duct. The exhaust duct removes hot air by isolating and redirecting it out the back of the cabinet and into the hot aisle, minimizing hot air recirculation and essentially converting side-to-side airflow into a front-to-rear airflow pattern. By running the entire height of the cabinet, one Network Switch Exhaust Duct can support exhaust for up to three network switches and provides freedom to organize and move equipment as needed.

Available in 10 heights and 11 depths, the N-Series TeraFrame offers the most comprehensive choice for supporting network switches inside enclosures, while also presenting advanced cabling solutions.

Remove hot exhaust air. Isolate and redirect exhaust air into the hot aisle.

Maximize energy efficiency. CPI Passive Cooling Solutions involve no active components and decrease TCO.

Supports hot aisle/cold aisle layout. Proper room design and airflow management allows network and server cabinets to sit next to one another.

Extra cable capacity. Offset doors and side panels provide more interior space.

Easy cable access. Cables route around the frame for easy access.

Simple RMU organization. Cable guides and management spools divide and organize cables.

CPI's N-Series TeraFrame meets third-party specifications for Cisco® 6500 and 9500 switches and provides the ultimate network cabinet solution. To personalize the N-Series TeraFrame, go to www.chatsworth.com/configurator.

CPI N-Series TeraFrame Network Cabinet

A network cabinet designed with airflow and temperature control considerations in mind

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www.Processor.com/TeraFrame

CHATSWORTH PRODUCTS, INC.

STORAGE

JUNE 22, 2007

Advanced Single-Instance Storage Deduplication

NetApp's A-SIS Helps SMEs Reduce Storage Costs

MENTION THE WORD data replication, and most IT staff will know what you mean. However, if you ask what deduplication means, you'll probably get a blank stare. In the storage world, it means looking for duplicate data and eliminating it. Network Appliance's A-SIS (Advanced Single-Instance Storage) does just that.

The product has been around for almost two years as a part of Symantec's NetBackup product. Now you can get it with any NetApp FAS or NearStore R200 storage system. This software runs in the background and has a negligible effect on the overall performance of the system.

Deciding whether this product will work for you depends on how you use your storage system. In the case of backups, it is highly likely that much of the data saved in a backup operation is identical to that in a previous backup. This type of scenario is perfect for deduplication and will result in significant savings.

In nonbackup applications the probability of recurring data is not as high but may still contain a significant amount of redundant data. The key to optimizing this type of situation is the granularity or size of the data objects that the system examines. NetApp A-SIS uses a high degree of granularity and a digital signature approach to identifying duplicated objects.

One key advantage of the A-SIS software is the tight integration with NetApp's Data ONTAP storage management software and its proprietary WAFL (Write Anywhere File Layout) storage virtualization technology. A-SIS can perform in the most efficient manner without adding any significant overhead to the file storage and retrieval process.

Enabling A-SIS requires only a single command line instruction on the supported storage systems. Once enabled, the process runs in the background to free up redundant areas on the file system.

Network Appliance A-SIS

Included at no charge on all NearStore on FAS and NearStore R200 systems

Handles the task of removing duplicate data on a storage system to reduce overall capacity requirements

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Restore and Maintain Peak Performance

Seven things you need to know about fragmentation – a special report

You know the importance of maintaining system performance and reliability. Your team is the one called to the rescue when systems crash, slow down or freeze. Many of these issues stem from a single, hidden source: disk fragmentation.

1. Reliability issues commonly traced to disk fragmentation:

Crashes and system hangs/freezes; slow boot times and boot failures; slow back up times and aborted backup; file corruption and data loss; errors in programs; cache issues; hard drive failures.

2. The weak link in today's computers:

A computer is only as fast as its slowest component. The disk drive is by far the slowest of the three main components of your computer: CPU, memory and disk.

3. Is automatic defragmentation needed in today's environment?

More than ever! Large disks, multimedia files, applications, operating systems, system up-dates, virus signatures — all dramatically increase the rate of fragmentation. Fragmentation increases the time to access files for all common system activities.

4. Increased server uptime:

Fragmentation can cripple server performance resulting in downtime and lost production. Diskeeper can easily and safely be used on your servers including: file and print, web, domain controllers, SQL, Exchange, and any other database or application servers.

5. Virtualization and fragmentation:

Server virtualization can be used to reduce the number of physical systems for more efficient CPU utilization. However, the disk subsystem must now account for increased disk I/O. Fragmentation is the primary cause of unnecessary I/O overhead. Defragmentation is more important than ever for maximum performance.

6. Hidden scheduled defrag costs:

Scheduled defragmentation is not "free" — it has heavy hidden costs, such as IT time to set and monitor defrag for every system. This results in either staying after hours to defrag, giving the users administrator privileges, break-fix handlings, or more often no defrag whatsoever.

7. How do I find out how much fragmentation I have?

Download a free trial of new Diskeeper 2007 at:

www.diskeeper.com/Pro07

Install it, select a volume, select Analyze and view the report.

Every system you manage needs Diskeeper for enhanced file system performance — automatically

Diskeeper® 2007
Enhancing File System Performance — Automatically™

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Note: 45-day trialware is only available at the above link

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Product Releases

PHYSICAL

Cable Distribution

■ A cable raceway system from **Panduit** preserves electrical grounding throughout, thanks to a patent-pending way to bond the metal channels and fittings. The result is greater electrical safety. The PMR5 and PMR7 Metal Raceway System features one-piece channels in almond or white. It can be attached with a variety of fasteners, not just with flathead screws.

Power Distribution

■ The Sentry Modular Cabinet Power Distribution Unit lineup from **Server Technology** can split one or two 3-phase inputs (208V, 30/60A or 400V, 32A) into single-phase power through modular Basic CDUs with LED load indicators. A secure Web interface allows monitoring of humidity, temperature, current, and power stats with email alert and SNMP alarm capabilities.

COMMUNICATIONS

Network & Systems Management

■ **Net Optics** introduced the iBypass Switch with Heartbeat, an in-line bypass switch designed to help address network security concerns. The iBypass Switch lets users engage bypass mode during planned outages for appliance maintenance, repair, and removal and during unplanned outages, such as during a power outage or device failure. The iBypass Switch lets users view reports on network utilization, physical layer statistics, link activity, and power status. The unit also counts bytes, individual packets, and under- and oversized packets and monitors packet collisions, packet loss, transmission latency, and errors identified by cyclic redundancy checks. Heartbeat is a feature of the iBypass Switch that sends packets continually to the IPS (intrusion prevention system) appliance. If the packet doesn't go through, the unit reroutes traffic away from the IPS directly through the Bypass Switch. The iBypass Switch is available in copper or fiber varieties.

Security

■ **8e6 Technologies** introduced Intelligent Footprint Technology for the R3000 Internet Filter and the 8e6 ProxyBlocker to prevent anonymous proxy use in school districts. Intelligent Footprint Technology includes a proxy pattern detection feature that allows school districts to identify the use of anonymous proxies and block access to inappropriate and unauthorized sites. The R3000 Internet Filter is able to block uncategorized sites based on signature files in the 8e6 database. The 8e6 ProxyBlocker is a dedicated appliance designed to supplement existing URL filtering and protect against the use of Web-based proxies and anonymizers, instant messaging, and peer-to-peer networks.

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■ **Catbird Security** announced Catbird V-Agent, a virtual appliance that is VMware-certified and can provide hacker protection to virtual networks. The Catbird V-Agent features rogue virtual device monitoring, Intrusion Prevention Systems, Intrusion Detection Systems, security compliance, and vulnerability monitoring to servers running multiple virtual machines based on VMware. The Catbird V-Agent can monitor virtual segments within a host, as well as physical network segments connected to the host. Catbird's stateless architecture is plug-and-play compatible for virtualized environments. Security data is also maintained when Catbird V-Agents are shut down or redeployed. V-Agents can track guests while providing security protection for virtual networks and the external network itself.

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■ **Layer 7 Technologies** has announced a virtual appliance designed for virtualized data center environments and SOAs. The Layer 7 Technologies SecureSpan XML Firewall is a virtual soft-appliance that has the same basic features as Layer 7 Technologies' SecureSpan XML Firewall hardware appliance. It lets companies deploy SOA security appliances on commodity server hardware and VMware virtualized computing platforms. It supports creating identical XML Firewall hardware appliance functions on multiple servers running VMware Player, VMware Server, or VMware ESX. It features real-time download and deployment, multitenant data center environment support, full clustering, utility computing over shared servers, and compatibility with Layer 7 Technologies' SecureSpan hardware appliances.

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■ **Palo Alto Networks** has launched its first product, a next-generation firewall based on AppID application classification technologies. With the Palo Alto Networks PA-4000 Series firewalls, companies can take advantage of total visibility and policy control for application traffic coming both in and out of the network. It supports all ports and protocols, as well as SSL encryption technology. The PA-4000 Series offers policy control for application access and usage. It can identify more than 400 applications and protocols, including social networking, SaaS, IM, soft phones, Web mail, and P2P. Products in the PA-4000 Series include the PA-4050 ($60,000), with up to 10Gbps throughput, and the PA-4020 ($35,000), with up to 2Gbps throughput.

Telephony

■ **3CX** released the Enterprise edition of its 3CX Phone System, a Windows-based IP PBX that can replace a proprietary PABX (private automatic branch exchange). The 3CX Phone System is compatible with a range of SIP phones, VoIP Gateways, and SIP-based providers. The Enterprise edition implements enterprise telephony features such as Call Queuing and Exchange 2007 integration. The Call Queuing feature allows companies to hold callers in a queue while agents answer calls. Agents are able to log in and out to queues from Windows to see the exact number of callers in the queue. 3CX Phone System can integrate with Exchange 2007 to utilize the Unified Messaging Server as a voicemail server.

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■ **Polycom's** SpectraLink NetLink e340, h340, and i640 Wi-Fi telephone handsets are prevalidated for FIPS (Federal Information Processing Standards) 140-2 Level 2 security. The phones are listed on the NIST (National Institute of Standards and Technology) prevalidation list. Other Polycom products on the prevalidation list include Polycom VSX video products and MGC/MGC+ unified conferencing voice and video bridges. The Wi-Fi handsets are available at prices ranging from $449 to $699.

Wireless

■ **Radio Frequency Systems** has rolled out what it calls the first phase in a new WINS

Go to Page 17

Is Your Network Up To Today's Challenges?

A10 Networks Products Are Designed To Help You Improve Application Performance & Minimize Risks

SECURITY. RELIABILITY. AVAILABILITY. Today's networks demand those things and more, which is the idea behind two of A10 Networks' flagship products: the AX Series and the IDsentrie.

AX Series For Application Acceleration

The AX Series, which recently won the distinctive Best of Interop Las Vegas and Best of Interop Tokyo awards, is the industry's best price/performing application acceleration switch, helping organizations of all sizes maximize application performance and availability. The AX Series is a next-generation server load balancer with an ACOS (Advanced Core Operating System) that is revolutionary by market standards for its multi-CPU architecture built from the ground up that leaps the competition in terms of performance, scalability and reliability. In addition, the AX Series' aRule advanced scripting technology allows for the customization of policies and features, without sacrificing performance.

The AX Series includes:

- Revolutionary ACOS (Advanced Core Operating System) that leverages modern system architectures
- Tuned for multiple CPUs and cores
- aRule policy editor allows for customization of features without sacrificing performance
- Industry's best SSL acceleration and L4-7 acceleration
- Supports IPv4 and IPv6
- Industry-standard command-line interface and easy-to-use GUI
- High-performance switch/route ASIC, SSL acceleration ASIC, and A10's Flexible Traffic ASIC
- Carrier-grade hardware components in all models

The AX Series application acceleration switch can make users' application responses up to 8 times faster.

Key benefits include:

- Improved user application response times by up to 8 times
- Five 9s reliability for accelerated apps
- The best price-performance per watt in a compact 2U form factor
- The ability to scale server farm capacity by up to 10 times with advanced server load balancing
- Protects application servers from DoS and protocol anomaly attacks with line rate performance
- Ensures application availability for legitimate traffic during malicious attacks

IDsentrie For Network Identity Management

IDsentrie is the industry's first network identity management appliance with instant user identity resolution, which helps organizations of all sizes save time and minimize risk by resolving security issues faster. IDsentrie is built on a flexible, virtual directory model for rapid integration with existing network infrastructure and support for a variety of popular data stores to simplify

The IDsentrie appliance offers integrated features to simplify identity and access management.

complex user resource management, and authentication and access issues.

IP-to-ID Service for instant identity resolution: Offers the unique ability to instantly correlate an IP or MAC address to a user identity, allowing IT personnel to immediately take corrective action on security issues.

User Self-Help Service for password and account management: Allows end users to reset passwords and update account information without the need to involve help desk or IT personnel.

Central account management with Unified Identity Manager: Consolidates user information from multiple data stores into a single, manageable virtual directory, providing provisioning, management, and deprovisioning of user accounts from one central interface.

Centralized authentication for simplified sign-on and guest access. Easily integrates with existing account infrastructure to help simplify the authentication process for users and guests and strengthens authentication mechanisms for devices such as remote access servers, wireless components, switches, routers, and security devices.

With IDsentrie, organizations improve their security and compliance requirements by enabling quicker network forensics. Busy IT departments can speed troubleshooting with IP-to-ID Services instantly resolving network issues to the users responsible. System administrators are more productive with Unified Identity Manager's ability to centrally provision and manage user accounts from multiple data stores simultaneously. Employees are more productive with User Self Help Services eliminating the need for help desk engineers to reset passwords and unlock accounts. Security is increased with network authentication and Radius features preventing unauthorized network access. And IDsentrie's rich reporting and auditing features provide full user identity visibility.

A10 Networks AX Series & IDsentrie

The AX is the industry's best price/performing application acceleration switch; the IDsentrie is the industry's first network identity management appliance with instant user identity resolution

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A10 Networks

Product Releases

Continued from Page 16

(wireless indoor solutions) suite. The company's ClearFill Line system has a 1/2-inch flat-foil radiating cable that can support frequencies from 800MHz up to 6GHz—an industry first, according to RFS. ClearFill Line is geared toward ultra-broadband, passive RF distribution systems of 30MHz to 6GHz, the company says.

END NODES

Mobile

■ **Gateway** announced it has boosted the features on its convertible notebook, incorporating new elements that offer digital artists a more innovative palette for the creation of various art forms. The E-295C adds the Wacom pen and digitizer with 256 levels of sensitivity. This allows for the extensive production of brush strokes, pencil sketches, and line drawings. It also incorporates updated graphics from ATI, while its ergonomic design highlights a 14-inch, scratch-resistant widescreen display. The security features include an optional fingerprint reader that keeps precious work safe from theft and software that allows stolen items to be tracked down.

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■ **MPC Computers** is targeting its TransPort 2500 notebook at enterprise users. The notebook is thin and light at less than 5.5 pounds and offers WXGA or WXGA+ display options. Graphics options for the notebook include video memory up to 256MB. The notebook's system memory can be expanded up to 4GB. It has an Intel Centrino Duo processor, TPM (Trusted Platform Module) 1.2, and an integrated fingerprint sensor and supports hot-docking. The notebook's optional docking station boasts Gigabit LAN and a DVI monitor port.

MPC also released the ClientPro 175 Desktop PC, which sports Intel Core 2 Duo CPU options, as well as USB 2.0, parallel, serial, and Gigabit LAN ports. According to MPC, the desktop also has a quiet and energy-efficient PSU.

Finally, MPC released the ClientPro 434 All-in-One PC. The monitor-shaped computer supports VESA mounting and can include a smart card reader. Customers can purchase the system in three configurations: a 17-inch display, a 17-inch display with touchscreen, or a 19-inch display. All of the computers support WinXP Pro and all Vista versions.

Monitors & Displays

■ **ViewSonic** released three LCD monitors in its VA family. ViewSonic is targeting the 17-inch, widescreen VA1716w and 19-inch, widescreen VA916w at customers who want to watch HD video content or view multiple documents simultaneously. The VA1716w boasts a 1,440 x 900 native resolution, a 500:1 contrast ratio, and 250 nits of brightness. The VA1916w also offers a 1,440 x 900 native resolution, but it has a 2,000:1 dynamic contrast ratio. The VA916, on the other hand, is a 4:3 flat-panel monitor. It has a 1,280 x 1,024 native resolution and 2,000:1 dynamic contrast ratio. The VA916 and VA1916w will be available next month for $239 and $229, respectively, and the VA1716w will sell for $209. The monitors have a three-year parts and labor warranty.

Printer

■ **TRENDnet** announced the 1-Port USB Multi-Function Print Server (Model TE100-MP1U), 2-Port USB 2.0 Multi-Function Print Server (Model TE100-MP2U), and 2-Port Wireless USB Multi-Function Print Server (Model TEW-MP2U). This new family of multifunction print servers gives users the ability to transform any standalone multifunction printer into a shared home or office network device. The 1-Port USB Multi-Function Print Server and 2-Port USB 2.0 Multi-Function Print Server work with Vista and have five-year warranties. The 2-Port Wireless USB Multi-Function Print Server lets you connect to your wireless network and offers advanced wireless security features.

Server

■ **SGI** has announced the creation of the SGI Altix ICE, a tightly integrated blade solution that minimizes the demands on a data center's power and space and utilizes a new version of the Atoka board, improving density considerably. It helps to enhance user productivity, while managing diverse and large scale-out workloads and HPC applications. In addition, this product improves energy efficiency with a water-cooled door design that sends chilled water through the unique hinged door, dispensing 95% of the generated heat and maximizing its life span. The new platform features support for dual high-speed, low-latency DDR InfiniBand backplanes to enhance the communication between nodes and racks even through the deployment to thousands of processors.

Storage

■ **Archion** unveiled the Synergy LS, a storage system for Avid users. Synergy LS is an extension of the Synergy HD storage system and is designed for customers who utilize Lanshare technology. The Synergy LS is a 4TB unit with two ports that each offer 2GB of storage. Synergy LS includes a Hardware RAID to protect media in the event of a drive failure without the need to mirror. The Synergy LS is engineered to expand the storage requirements of existing Lanshare clients without the need to replace or upgrade their current technology infrastructure. Synergy LS is also compatible with Archion's Alliance and Synergy products.

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■ **Iomega** introduced the Iomega eSATA/USB 2.0 Professional Hard Drive, a slender hard drive that uses the new 3Gbps eSATA interface for fast access to its 500GB storage capacity. This Iomega eSATA Professional Hard Drive also comes with EMC Retrospect Express software for automatic backups, scheduled backups, or on-demand backups. For computers that do not have an eSATA interface (PCI eSATA cards are available separately), the USB 2.0 interface offers a universal alternative. The drive is compatible with Microsoft Win2000 Professional, WinXP, Vista, and Mac OS X 10.2 or above.

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■ The new DXi7500 enterprise disk backup and replication system from **Quantum** is unique in that it also provides data deduplication, disk-to-tape, and remote replication features. It's scalable up to 240TB with transfer speeds of up to 8TB per hour, the company says. The target market includes primary data centers, midrange enterprise settings, and distributed sites.

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STORAGE

MAY 25, 2007

Virtual Tape Made Simple

NexiTech VTA*ng* Can Accelerate Your Backup & Restore Operations

IN RESPONSE to market demand, NexiTech has created a modular virtual tape array storage appliance: the next-generation Virtual Tape Array, or VTA*ng* (*vee-tang*).

VTA*ng* is a hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance. The product is aimed at IT directors and managers in the small to medium-sized enterprise market and is designed to help accelerate backup and restore operations. Unlike other similar products on the market, the VTA*ng* can be customized.

Virtual tape emulation technology is used to create a device server that acts just like a bunch of tape drives from the perspective of one or more host computers or backup servers. Since the backup appliance presents a view of one or more "virtual" tape drives to the host, it is appropriately called a virtual tape array. Similar to a VTL (virtual tape library) but faster, the virtual tape array offers many of the same benefits as a VTL but with less complexity and lower cost of ownership.

Three Versions

VTA*ng* appliances come in three forms:

Head form. This device bundles hardware and software with a 1U or 2U rackmount server, but with minimal internal storage. This form is ideal for enterprises that want to try out virtual tape technology and at the same time save some money by using the head to convert legacy equipment into a D2D backup appliance. This helps them to preserve their existing investments in storage resources by extending the useful lifetime of those resources (yesterday's primary storage may be useful as today's secondary storage). Customers like the convenience of buying a more integrated solution that the head form brings, and they want to use it as a controller for some existing external hard disk storage (e.g. RAID or JBOD arrays) that they already have in their possession.

Disk form. This version provides a higher level of integration by bundling hard disk storage within the 3U D2D backup appliance. And with the use of ruggedized removable disk storage devices, the subsystem becomes a D2D2RD (disk-to-disk-to-removable disk) backup appliance, letting users archive backups with a true tape replacement technology: portable hard drives packaged for removability. Storage security is always a concern, but even more so when moving data offsite. To address that concern, there is an optional hardware-based compression/encryption engine that uses the AES-256 encryption algorithm.

Kit form. This version of VTA*ng* can vary depending on the existing hardware you wish to use. Give us a call or email us for details.

Simple To Use & Manage

VTA*ng* is simple to use and manage. A GUI lets you easily define virtual tape drives and configure the associated bus, target, and LUN values that will be seen by the host. The devices are conveniently arranged in a device tree, and any drives with media loaded are shown in boldface. The user can easily define the file that is used for the backing store and the file size by simply clicking a device. Virtual tape media can be loaded or unloaded with a click of the mouse, and all virtual tape devices can be started or stopped at once. The GUI also lets users trace all the SCSI commands sent to a particular virtual tape device and will save that information to a trace file. The iSCSI device mappings are also configured graphically, letting the user define which devices are mapped to iSCSI targets.

For those users that need to remotely manage the VTA*ng* backup appliance, Remote Desktop is bundled with Microsoft Windows Unified Data Storage Server 2003 R2, the operating system running on the appliance. Clients are available for most Windows versions, so a Windows client can control the desktop of the appliance and manage it over a network connection as if sitting right next to it.

Support for those particular tape drives that are emulated by VTA*ng* is bundled with Windows, so for many customers, connecting a VTA*ng* backup appliance is quite easy: the host detects the virtual tape drives and then automatically loads the correct driver.

Specifications

Connectivity: NAS and SAN
Transport: iSCSI, Fibre Channel, and SCSI
Media: Fixed and Removable Disk
Redundancy: RAID (0, 1, 5, 10, 50)
Virtualization: Virtual Tape and Disk
Encryption: AES-256

NexiTech VTA*ng*

Starting at $4,995, depending on configuration

A hardware/software product that transforms an ordinary computer or rackmount server and the hard disk storage attached to it into a D2D (disk-to-disk) backup appliance

(719) 687-3225

www.Processor.com/VTAng

NexiTech

Product Releases

Continued from Page 17

■ **Overland Storage** has announced the ULTAMUS RAID 4800, which includes high-availability features and dynamic scaling options. This latest product can scale to 72TB with RAID 6. It is available with dual active or active 4Gbps Fibre Channel controllers. The product's features include dual 4Gbps Fibre Channel host connectivity; a 3Gbps point-to-point SAS architecture; redundant critical components, including controllers, cooling systems, and power supplies; RAID 0, 1, 5, 10, 50, and 6 support; a Web-based management console; and support for Windows, Linux, and VMware. ULTAMUS RAID 4800 is compatible with Overland's REO, NEO, and ARCvault backup and recovery appliances. Prices start at $46,861.

Workstation

■ **Axiomtek** has released the SBC81203 PICMG 1.0 Single Board Computer. The full-sized computer comes complete with an LGA775 socket Intel Core 2 Duo processor with up to 1,066MHz FSB. Also, the SBC81203 features an Intel 945G+ICH7R express chipset that helps to manage multiple applications at once. For graphics, the SBC81203 sports the Intel GMA 950 graphics core and combines this with a Realtek ALC203 Audio codec to maximize the multimedia experience. The SBC81203 will be available next month.

SOFTWARE

Business Productivity

■ **Exanet** has released ExaSearch, an enterprise-class search engine that integrates with Exanet's scalable, high-end ExaStore software, creating what the company says is the first scalable, high-performance clustered NAS solution combined with enterprise-class search abilities. The combination lets customers easily access about 3 petabytes of stored data. The search engine can search multiple sources, including file servers, email systems, groupware, databases, and employee directories. Additionally, the search engine can process unstructured data and queries and grant immediate access to new content through real-time indexing. ExaSearch is now available, with pricing based on storage capacities.

Imaging & Printing

■ **Kyocera** launched iTag 2.0, which serves as a user-friendly, scalable document manager for the small office or department. iTag allows users to capture, store, and retrieve scanned documents easily and efficiently, with a doubled memory and fully integrated color touchscreen validation station. Kyocera has updated security and privacy settings, allowing only authorized users to manage documents. The iTag comes with a Dell server, Microsoft Windows SharePoint Service 3.0, and one Kyocera multifunctional device connection. iTag is available at Kyocera retailers for $15,000.

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■ **TEKLYNX International** introduced SENTINEL S/5 Print Pack and Data Exchange 5.03, the latest version of its server-side print management software. SENTINEL is an automated, event-driven data management and AIDC printing tool that processes and maps enterprise-wide data collection and label printing requests, regardless of the format, technology, or system. The new version enhances several capabilities, including support for LABEL ARCHIVE traceability software and SENTINEL Backup Server.

Messaging & Groupware

■ **Mimosa Systems** has announced NearPoint 3.0 for Microsoft Exchange Server. The new product offers grid computing in email-archiving environments and supports hundreds of thousands of mailboxes, version history for Active Directory, archiving, continuous data protection, and disaster recovery for public folders. NearPoint 3.0 is self-healing and has a hot-plug modular architecture for adding and removing servers without requiring downtime. It can be configured in a superscalar grid or in a superpipelined grid. NearPoint 3.0's features include disaster recovery; better support for Exchange 2007, Live Communication Server (IM), and 64-bit Servers; automated PST file archiving; Active Directory integration; public folder archiving; scalable storage; international language support; and preinstallation and configuration tools.

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■ **Open Text** released an updated version of its FirstClass Collaboration Suite, an integrated communications and collaboration software suite designed for medium-sized to large organizations. FirstClass Collaboration Suite 9.0 is a suite of integrated applications that assist users in the creation of collaborative online communities accessible from any Internet-capable device. The new version now features the FirstClass Archive Services, which deliver policy-driven automatic archiving; support for Unicode; the ability to combine multiple calendars into one view; new contact sorting options; InstantSearch, which quickly filters all fields displayed in a given application window; and a customizable Launch Bar.

Mobility

■ **Motorola** launched the latest iteration of its Good Mobile Messaging software and service designed for organizations of all sizes. Good Mobile Messaging 5 now includes the handheld security capabilities that were previously offered separately in the Good Mobile Defense product. Other new features include the ability to group and find by conversation and sender, complete calendaring, edit and send document capabilities, dial without password, and third-party access to contacts. The new version also adds several useful tools, such as a mobile RSS reader and subscription manager, priority mail, and personalized notifications. IT personnel will also find several new advantages, such as mandatory applications, application lockdown, advanced password management, and simplified load balancing. Good Mobile Messaging 5 will be available next month.

Network & Systems Management

■ **Agilent Technologies** announced its WiMAX Optimization Solution for IEEE 802.16e-2005, which provides a drive-testing capability for its network optimization test platform. The WiMAX Optimization Solution for IEEE 802.16e-2005 lets WiMAX network equipment manufacturers and service providers authenticate the subscriber experience in real-world WiMAX environments. The WiMAX Optimization Solution is enhanced for ultra high-speed

Go to Page 19

Lose that important file?

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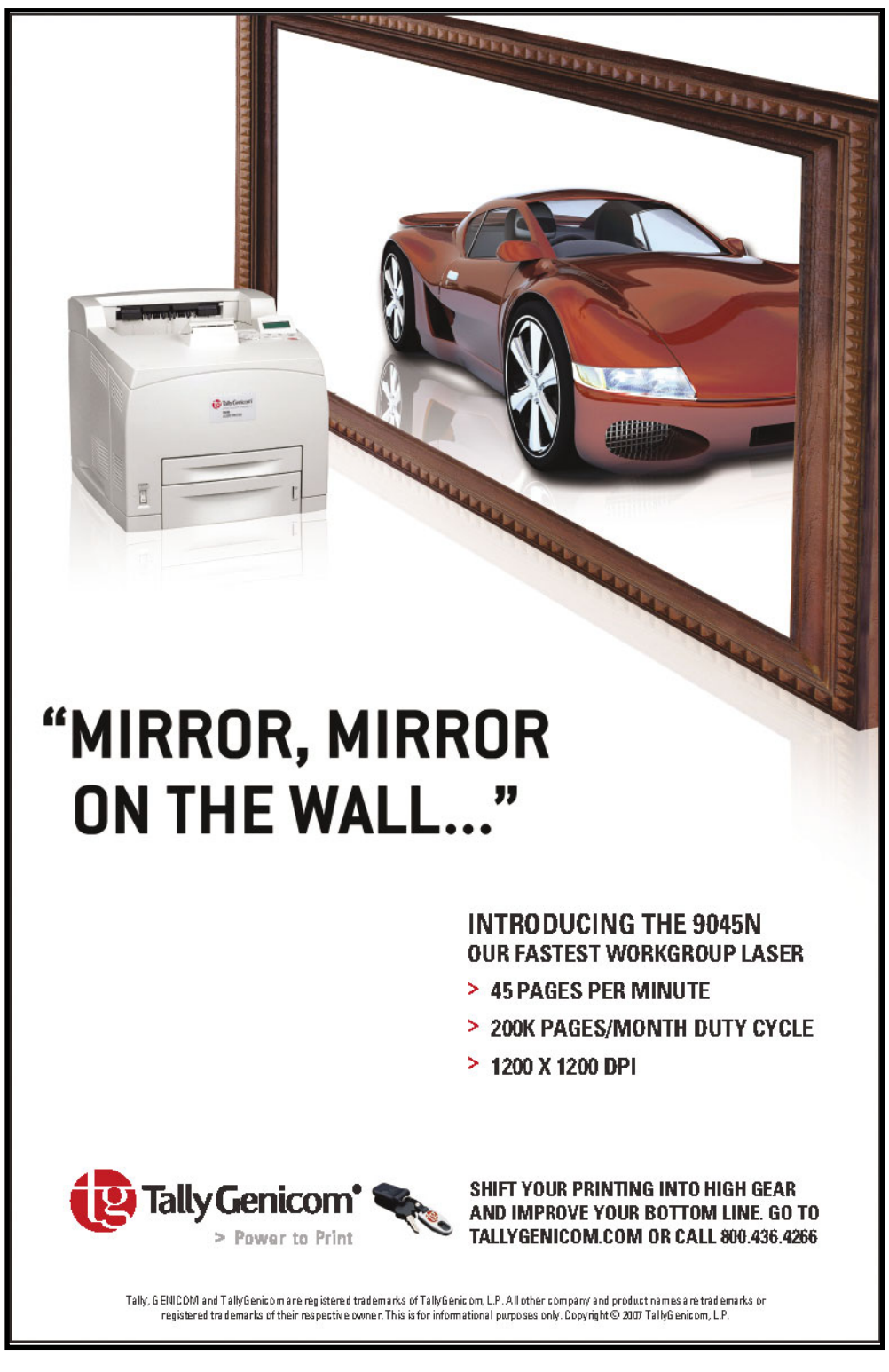

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Product Releases

Continued from Page 18

packet data transfer with QoS, so 4G wireless communications systems can deliver business-critical data services with network-enforced QoS. The Agilent wireless network optimization test platform for RF engineering and operation teams enables WiMAX to test for IEEE 802.16e-2005 to drive-test capabilities through a scalable, integrated, and air interface measurement system.

• • • • •

■ **Cittio** has released its CMAS (Cittio Managed Administration Services) product, which alleviates time-intensive network- and systems-monitoring projects with tools to manage the configuration and administration of Cittio WatchTower implementations. CMAS provides customers with a single, up-to-date network and system for viewing an entire infrastructure, including everything from servers to applications. Unlike other software-as-a-service products, Cittio says customers actually own WatchTower software and can make adjustments to features based on their requirements. CMAS offers four levels of services, including Baseline Administration through Premiere Plus Administration. CMAS' features include remote monitoring of WatchTower from Cittio's NOC (network operations center); secure, permission-based remote access technology; scheduled performance and application tuning; remote patch and upgrade systems; and more.

• • • • •

■ To combat human error in network failure, **CA** has launched the CA SPECTRUM Network Fault Manager 8.1. In combination with CA's eHealth system management software, IT managers can now proactively keep networks running while determining which problems are the result of human error, as well as track the root cause and impact of each problem that arises.

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■ **Configuresoft** has released Configuration Intelligence-Analytics, which it says is a core component of the company's Intelligence initiative. Intelligence-Analytics is a measurement and management tool that gives customers visibility into granular distributed systems management data from various sources. Management data can include service desk, provisioning, performance monitoring, and CMDBs (Configuration Management Databases). The product also provides a dashboard of indicators and metrics that customers can use to articulate strategies and visions and develop executable goals. Mechanisms that Intelligence-Analytics provides include Balanced Business Scorecards and Key Performance Indicators. Intelligence-Analytics is available as a module for Configuresoft's ECM product beginning at $50,000.

• • • • •

■ **Tidal Software** has released Tidal Intersperse 7, the latest tool for monitoring and managing SOA solutions based on Java, Web Services, and .NET. Tidal Intersperse 7 provides service to environments that combine a range of portals, ESBs, Web services, and application servers in an SOA-based operation. It helps detect performance problems through runtime monitoring across several application servers to build an overall view of the process with just a single tool. It outlines the detection of the problem, while it performs fast problem localization and utilizes deep-dive metrics for root cause analysis. In addition, it offers automated corrective action to create self-healing solutions for SOA actions.

Security

■ **SECUDE** released FinallySecure 1.0, which offers authentication and encryption for Seagate 5400 Momentus FDE.2 (Full Disk Encryption) drives. The software provides Data-at-Rest security and supports upgrades to newer PCs with FDE hard drives. FinallySecure is part of the Secude security portfolio. The software protects users against data theft and loss and helps customers adhere to data security standards.

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■ **Untangle** launched the Untangle Gateway Platform, a commercial-grade open-source solution for blocking spam, spyware, viruses, adware, and unwanted content on the network. The Untangle Gateway Platform is a comprehensive and integrated solution that distinguishes itself against other appliance vendors in five key ways: cost (free), hardware (off-the-shelf), speed (immediate free download), flexibility (have it your way), and future proofing (open platform). Built around more than 30 best-of-breed open-source projects—including SpamAssasin, ClamAV, and Snort—the Untangle Gateway Platform provides the convenience, features, and stability of other applications at a fraction of the cost. Users can download, install, and configure the complete system in less than one hour.

Storage

■ **Network Appliance** announced a targeted ReplicatorX offering designed for large data centers running mixed storage environments. The latest version of ReplicatorX helps users manage critical tasks such as disaster recovery, data migration, and cloning for test and development. Network Appliance makes deploying ReplicatorX simple with an intuitive centralized management interface. Users will also appreciate ReplicatorX's support for global data consistency across multiple servers and storage infrastructures. Network Appliance is also willing to lend a hand with its NetApp ReplicatorX Implementation Services, including the ReplicatorX Essentials Service and the ReplicatorX Design and Implementation Service. NetApp also announced updated versions of its SnapDrive storage provisioning software for Windows and Unix. ReplicatorX is available in both enterprise and standard editions.

SERVICES

Network & Systems Management

■ **Tigerpaw Software** and **Kaseya** have announced a partnership designed to increase efficiency and functionality for IT managed services. The arrangement between Tigerpaw CRM+ and Kaseya's MSA software will pair Kaseya's network monitoring capabilities with Tigerpaw's PSA (professional service automation) tools, providing added effectiveness for CRM, service automation, and inventory tracking. It also helps to provide a more complete view into clients' IT environments. The process will begin when an email alert is generated through Kaseya's solution. Then, it will be monitored, interpreted, and routed to the appropriate technicians through the Tigerpaw CRM+ Managed Services Integrator, creating an effective communication process.

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DATA CENTER SERVICES

JUNE 22, 2007

What Do You Do With Your Old Tapes?

Recycle Your Media Buys All Types Of Tapes & Recycles Them Using Secure & Environmentally Sound Methods

THE MOST VIABLE SOLUTION for your end-of-life media is to recycle using a reputable service provider such as Recycle Your Media. Not only is tape recycling environmentally sound due to the overabundance of e-waste in landfills, it is also economically sensible because you can recoup IT costs.

Virtually every enterprise uses tape media for protecting and storing data. And the use of tape media is growing sharply as the amount of electronic information grows and enterprises face increasing legal and regulatory pressure to store electronic information.

No Trivial Matter

According to the EPA, nearly 3 million tons of consumer electronic waste was generated in 2003; it's estimated that only about 11% of this was recycled. Tape disposal is not a trivial matter. Not only does tape contain confidential company information that must be either erased or destroyed so that it does not fall into the wrong hands, but tape media is not biodegradable and should be eliminated from the solid waste stream.

To reduce costs, ill-equipped or unreputable recyclers may work through brokers to send media to other countries or illegal waste dumps in the U.S. That means your tapes and data may change hands many times before being destroyed.

When dealing with disposal service providers, reputation is the most important factor to consider. Always work with a reputable disposal service provider that uses only approved disposal methods and can provide you with a certificate guaranteeing your tape has been properly disposed of.

Can My Media Be Degaussed?

Not all popular computer cartridges can be degaussed and must instead be overwritten with special software. Consult this chart for common media that can and cannot be degaussed.

Product Type	OK To Degauss (Yes/No)
AIT 1,2,3,4	Yes
DC100/1000	Yes
DC-2XXX	Yes
Travan 1,2,3	Yes
DC-6XXX	Yes
Magnus	Yes
SLR-5	Yes
DDS	Yes
DAT	Yes
Mammoth	Yes
34X0	Yes
DLT X	Yes
SDLT X	Yes
Travan 4,5,7	No
SLR-6,7	No
3590(J)	No
3590E(K)	No
9940 / 9940	No
LTO 1,2,3	No

A reputable disposal service provider can even bring the degaussing equipment onsite and manage it with trained personnel. For tape media that contains sensitive information, this provides a means of recycling, rather than destroying, tape media.

Your Tape Disposal Options

There are two methods of disposing of tape media: destruction or eradication. In destruction, the tape is incinerated or cut and pulverized. Eradication involves erasing the tape's data by applying a high-intensity magnetic field to the tape. Proper erasure removes the risk that the pre-existing data on the tape falls into the wrong hands. But only professional-grade degaussing equipment, correctly calibrated and operated by experts such as Recycle Your Media, will do a proper job of erasing cartridges.

To reduce the risk of losing confidential data, the easy decision may be to destroy the tape, but this carries a cost burden and it impacts the environment. The decision to recycle tape has advantages for the environment and for your expenses, but it also carries the risk of data loss.

When choosing whether to recycle tapes, consider these factors:

- Tape that has been mishandled or is old and worn out or simply damaged cannot be used again. This tape has no more useful life and should be destroyed.
- If your tape media is in good condition, recycle it. Even if a tape is two years old, it likely has not been used continuously. It is common to find tape that has only been used for a fraction of its useful life.
- If you're upgrading to the newest tape technology, chances are other organizations can still utilize the tapes. In this case, recycling is the right option.

Perfect For Recycling

Recycle Your Media is focused and concerned about the statistics involving the destruction of our environment caused by excess e-waste in landfills. Recycle Your Media exists to provide a service that is environmentally conscious and prides itself in maintaining safe and secure methods for your end-of-life data solution. Recycle Your Media has innovated and perfected a way to ensure companies worldwide that there is a solution to these ongoing issues.

Sell us your new, used, or even obsolete media. Your sensitive data is secure and destroyed with manufacturer-approved processes and equipment, and you will get a Confidentiality Agreement upon request.

We've implemented an aggressive data media recycling program that is easier than ever. Every Recycle Your Media master shipment includes a prepaid product-shipping label. When conscientious customers return data cartridges, we pay the postage.

Recycle Your Media

Provides a tape recycling service that is environmentally conscious, safe, and secure

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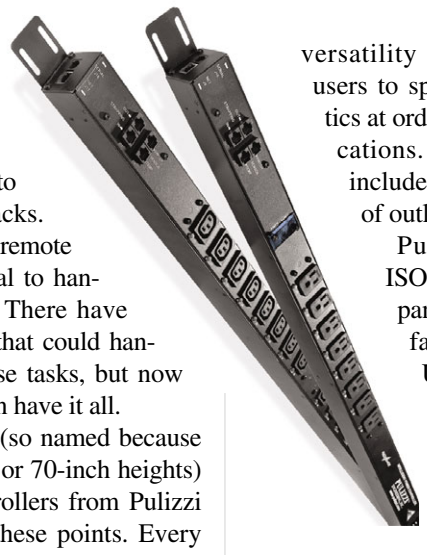

EVERY DATA CENTER is confronted with distributing, controlling, managing, and monitoring electrical power to all the devices in its racks. For some IT personnel, remote access becomes essential to handle multiple locations. There have always been products that could handle one or more of these tasks, but now data center managers can have it all.

The IPV42/70 series (so named because they come in either 42- or 70-inch heights) Intelligent Power Controllers from Pulizzi Engineering cover all these points. Every aspect of each outlet can be viewed locally, via a digital meter, or remotely, via Web browser, Telnet, or SNMP software. Out of the box, the IPV42/70 series can monitor voltage and current but, with an optional environmental sensor kit, can be expanded to include data on temperature and humidity. There are additional inputs allowing for integration of switches to detect rack enclosure events, and the software interface is feature-rich.

The software can be configured either to work with SNMP management software by sending traps or to send email alerts when triggered by an event. Each unit, outlet, and sensor can be named in software for a user-friendly interface, and there is a provision for multiple user logins for remote access. Pulizzi Engineering highlights the versatility of this line by enabling users to specify certain characteristics at order to suit an array of applications. Customizable attributes include voltage, current, number of outlets, and connector types.

Pulizzi Engineering is an ISO 9001:2000-certified company that designs and manufactures its products in the U.S. It has a reputation for high quality that has won the company business from many Fortune 500 companies, as well as some government agencies. This quality is evident in its products, which meet objectives and certifications such as RoHS, UL safety specifications, and CE directives.

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Staco TreStar P Series 125-150kVA model

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The TreStar P Series was designed with the end user in mind. It offers the highest quality, along with the reliability you expect. It is easy to install and has a user-friendly front control panel with an easy-to-read LCD menu. Its advanced battery management system reduces the frequency of maintenance and replacement schedules, saving you time and money.

Staco's TreStar P Series comes in two versions: 125-150kVA and 180-225kVA. The 125-150kVA is parallelable for capacity or redundancy, with up to eight modules, and features a 0.9 output power factor, vector-controlled IGBT inverter, input circuit breaker, internal maintenance bypass, advanced battery management, and an optional 7% harmonic filter.

In addition to all the features found on the 125-150 model, the 180-225kVA model also features state-of-the-art communications, matching battery cabinets with internal disconnect, top and bottom cable entry, and a standard 7% harmonic filter.

Other optional features include:

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DATA CENTER SERVICES

April 6, 2007

Turn Old Equipment Into Cash

Horizon Datacom Solutions Helps Businesses Make The Most Of Their Network Hardware Investments

Horizon Datacom Solutions, located in Columbus, Ohio, has one specific goal: helping businesses make the most of their network hardware investment. Many businesses are faced with growing (sometimes painfully high) capital budgets, and yet they have literally stacks of switches, routers, wireless gear, and other network hardware that they have outgrown, no longer need, or don't have room for. Some businesses find that they have racks filled with decommissioned hardware, or that due to expansion or changing needs, they don't have the right equipment.

In the past, the hardware would simply sit in a spare room or corner until it was eventually hauled away and disposed of in a mass "asset recovery" that took CRT monitors, desktop computers, printers, and other e-waste and hauled it away. But this no longer has to be the case.

Horizon Datacom Solutions specializes in refurbishing network hardware and can help you recover value out of what you have. Plus, selling your equipment to us helps keep it out of a landfill, helping contribute to your corporate "green" initiatives.

Get Value From Used Equipment

Horizon Datacom helps businesses and organizations get value back from their used equipment. Stated simply: We turn old network equipment into cash.

We are committed to refurbishing and putting that same equipment we purchase back into useful life, which provides additional value to our customers who both save money purchasing from us and get reliable hardware, backed by our guarantee and hard-won reputation for quality and customer service.

At Horizon Datacom Solutions, refurbishing involves much more than blowing the dust off of circuit boards. Horizon Datacom maintains a full testing lab where every piece of equipment is rigorously tested and repaired if necessary. We repaint the chassis, replace missing or broken parts, and carefully repackage the finished product. In fact, many of our customers claim the hardware they purchase from us is virtually indistinguishable from new hardware.

Horizon also offers refurbishing services for companies that want to redeploy their own gear. You simply send it in, have it tested and refurbished, then it's sent back to you, ready to deploy at new locations or for new uses.

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- SonicWall

If you have surplus equipment, please note quantities, description, condition, and any other notes where possible.

If you frequently upgrade your equipment or have large quantities to dispose of, let us design an asset management plan for you. We can help you increase both cash flow and return on assets by faxing or emailing your list of surplus equipment.

Real-Time Inventory

Some businesses are leery about buying from the "refurb" market—some with good reasons. eBay can be a crapshoot: You may be dealing with a guy operating out of his garage, or worse, finding yourself buying counterfeit gear.

Horizon Datacom has been in business for more than 10 years. And, in 2003, we were recognized as one of the Inc 500 fastest growing businesses in America. Businesses worldwide purchase refurbished networking equipment from Horizon Datacom.

Horizon maintains a complete, real-time inventory listing on its Web site at www.horizondatacom.com. While some companies may say, "I can get that for you," when you use Horizon Datacom's online store, you can be assured that what you see online is on the shelf and ready to be shipped to you. In fact, most orders are packed and shipped the same day. And right now we're offering free FedEx ground shipping on most orders of $100 or more within the continental United States.

Repeat Customers

Vicky Nosbisch, owner and president of Horizon Datacom Solutions, says, "I'm proud of the fact that most of our customers are repeat customers. Few things give me greater pleasure than buying network gear from a customer, seeing it arrive at our loading dock, then coming back to life in our test labs, ready to find a new home with a new customer."

And Vicky has a challenge: "Send me a list of your unused network gear. We'll show you how much it's worth, make you an offer, and help you find the network hardware you need."

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OPINIONS
INFO-TECH • INSIGHT

Who Needs A Chief Risk Officer?

Increasing compliance and security demands are creating an enterprise need for a new role to encompass and assume responsibility for risk management. Although most organizations handle risk management on an ad hoc basis, it may be time to make risk management a dedicated position.

I hear a lot of companies complain that the business just doesn't step up to the plate when it comes to mitigating risk. "No ownership!" they cry. "How am I supposed to protect data when the executives won't even tell me what our information assets are worth?"

To me, the problem seems to be that compliance/governance and IT security are not under a single umbrella, when they probably should be. So what's wrong with current approaches to risk management? Depending on company size, one of three scenarios exists, and each has specific problems.

In the first scenario, the CFO is tasked with compliance because he understands financial reporting and filings. That's great, but there's a knowledge gap: Compliance almost always has a strong IT security angle, and yet the CFO is not well-versed in IT-specific risks.

In the second scenario, the CSO gets saddled with compliance. This may work well from the IT side, but CSOs usually know little about business issues. The result is too strong a focus on IT security and not enough on business risk management.

Finally, in the third scenario, the CIO is tasked with both compliance and security because the business assumes that these two issues are IT problems alone. The CIO ends up working in a vacuum without any direction or advice on how to manage risk.

A designated chief risk officer, however, could alleviate the lack of ownership by assuming responsibility for managing the risks posed by compliance and security. The CRO fulfills a role that serves to manage all aspects of risk holistically and transparently.

What Would You Say You Do Here?

Ideally, the CRO would be completely in charge of risk management, with the goal of balancing IT security with the needs of corporate governance and compliance.

On the IT security side, the CRO would align IT with a best practice framework, automate internal controls, centralize logging and reporting, and ensure IT and business integration/transparency. On the compliance side, she would deploy integrated security solutions, liaise between internal and external audit teams, and establish principles for holistic compliance management.

Selecting a CRO is a process that should be given careful consideration. The CRO will be responsible for managing all risk, so ideal candidates demonstrate deep knowledge, high integrity, excellent business judgment, and proven risk assessment abilities. When on the recruitment trail, beware of the following pitfalls: hiring an individual who is either too tech-oriented or tech-ignorant or lacks depth in industry-specific issues, failing to clearly define the role, and having gaps in corporate culture or communication.

Fitting the CRO into the organizational structure is really going to depend on each company. Large, mature enterprises with a clear need for the CRO role—and the budget to match—will find it easier to make this work: Simply have the position report to the CEO and board of directors. Meanwhile, the CRO would work closely with the CIO and CFO for mutual support and advice.

A midsized to large company with enough risk to need CRO duties filled, but that cannot yet dedicate the resources, would be better off creating a team to assist the CIO in the execution of these duties. This team should consist of business guidance and legal counsel.

SMEs with moderate risk and limited budget are in a bad spot. The best they can do is assign cross-silo duties to the vice president of IT who will support the CFO by offering a better understanding of IT risk. It's not ideal, but few SMEs can afford a CRO. Ensure that at least one member of senior management understands IT security issues and that the security administrator has access to the rest of executive management.

What To Do?

First of all, determine the need for a risk or compliance executive. Any midsized to large enterprise with a strong compliance mandate should have a CRO. Similarly sized organizations without a compliance mandate—but with a strong requirement to protect trade secrets and other sensitive information—should also recruit a CRO.

Hiring a CRO is not cheap. High salaries and generous bonuses are the norm, and the enterprise must carefully weigh the need for a CRO vs. the actual benefits.

Recruit the appropriate mix of skill, knowledge, and experience. The CRO must have baseline knowledge of IT security issues, including viruses, hackers, and so on. He also needs experience creating, implementing, and enforcing business and security policies.

Make the CRO report to the CEO. Sometimes there are conflicting interests between the IT department and business units. Making the CRO an independent entity will let her act in the best interests of the corporation as a whole.

Send your comments to infotech@processor.com

ROSS ARMSTRONG

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HVAC April 13, 2007

Cooling For Cramped Spaces

MovinCool CM12 Ceiling-Mounted Unit Designed To Save Space & Money

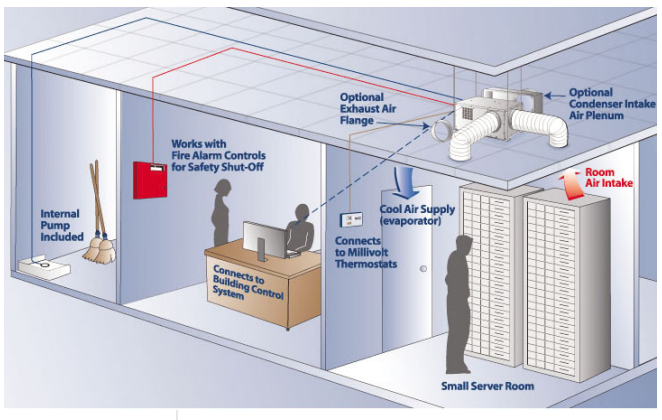
Spot cooling is an energy-efficient alternative to central air conditioning. But often the main roadblock to efficient cooling of cramped server telecom and equipment rooms is the lack of floor space to accommodate a roll-in portable spot cooler. The MovinCool CM12 offers a convenient solution: It's a lightweight, space-saving, easy-to-install ceiling-mounted unit.

The CM12 delivers 10,500Btu/H of cooling in a self-contained unit that mounts easily with off-the-shelf hardware. It connects to a standard 115V, 15-amp circuit.

The CM12 features the shortest top-to-bottom profile in the industry—only 15.5 inches—ensuring it will fit into nearly any drop ceiling. In addition, the CM12 comes with several cost-saving capabilities and safety features:

- Conveniently controlled by most off-the-shelf Millivolt thermostats
- Works with fire alarm controls for safety shut-off
- Self-contained system requiring no refrigerant piping
- Built-in supply and return air flanges enable easy duct installation and improved air circulation
- Warning signals and alarms for condensation overflow and unscheduled shutdown can be wired to a central location
- A standard internal pump
- Mounting brackets designed for off-the-shelf mounting hardware

In addition to the CM12, MovinCool offers the Office Pro lineup of portable spot cooling solutions for low-temperature equipment cooling; the Classic and Classic Plus Portable Series for harsh environments; and the PC7 Portable Air Conditioner for individual hot spots.



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STORAGE July 6, 2007

Continuous Data Protection: Do You Need It?

CDP Is Now Easier & Cheaper Than Ever Before

The era of the scheduled backup is finally coming to an end. Continuous data protection designed for SMEs is here.

NetMass CEO Mark Martin says that his company now makes offsite backup with CDP an extremely affordable option—and with none of the painful deployment.

ServerSafe CDP offers constant capture of all data changes as they happen, allowing point-in-time recovery rather than the traditional approach of a scheduled backup. With CDP you just roll back your data set to the point just before the incident.

With one easy solution, your data is backed up to professionally managed data centers that are disaster-hardened, temperature-controlled, and highly secure and offer exceptional business continuity.

CDP is ideal for:

- Data that changes rapidly
- Applications with shrinking (or no) backup windows
- Applications prone to corruption
- Applications for which a 24-hour window of data loss is unacceptable

"A big difference is that ServerSafe integrates CDP into the backup application, so no additional purchases and installations are needed. This results in significant cost savings," Martin says.

Service charges are based on how much compressed data is stored remotely, which is ideal for SMEs that need CDP for mission-critical applications but need normal backup for files that change less frequently.

NetMass President Stephen Perkins says CDP for Microsoft Exchange is a popular feature. "Email has always been difficult to restore. Partial restores are painful, and restores from tape are unreliable. CDP for Exchange at the brick level, combined with point-and-click restore (from individual emails to the entire Exchange store) now makes Exchange recovery quick and easy. You're up and running in seconds or minutes rather than hours or even days."

ServerSafe features hot backup of Exchange (with message-level restore) and a hot backup of SQL; it also has a built-in capability to allow a local backup copy, in addition to the offsite copy, for speedy LAN-speed restores. CDP is incorporated at no additional cost.

Visit NetMass' Web site or call for a free 30-day trial of ServerSafe or for information on the ServerSafe Reseller Program.

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PRODUCTS AT WORK

Energy Company Harnesses Asigra To Simplify Backup & Restore

NetMass Handles Offsite Backups With Ease

by Drew Robb

• • •

VAALCO ENERGY (www.vaalco.com) is an independent energy company based in Houston. Due to an explosion in the volume of data being managed and tougher compliance laws being imposed on publicly traded companies, its tape-based backup procedures were no longer good enough. So the company switched to Asigra Managed Backup Services by Asigra of Toronto, Canada. Backups are now sent offsite to a facility managed by NetMass (www.Processor.com/NetMass-Co) of McKinney, Texas. Instead of hours each day on backup administration, it takes a few minutes.

"Offsite backup is totally automated, requiring no manual interaction," says Dereck Stubbs, an IT specialist at VAALCO. "This is a very big plus for any small company."

VAALCO Basics

VAALCO is principally engaged in the acquisition, exploration, development, and production of crude oil and natural gas. Its plan is to increase reserves and production through the exploration of oil and gas properties, with an emphasis on international opportunities. VAALCO's properties and exploration acreage are located primarily in Gabon and Angola in West Africa. This includes an offshore platform, with another one under development.

Asigra Managed Backup Services comes with a wealth of features. Besides backup and restore, it includes encryption, a robust compression engine, and extensive reporting.

The central data center of VAALCO is located in Houston. It runs all IT operations and applications worldwide. About 10 Windows servers run a wide range of applications, such as accounting, purchasing, and Microsoft Exchange. In addition, the energy firm also harnesses geophysical and seismic systems in order to run projections and to interpret the size and potential life cycle of oil and gas reservoirs. These are Dell servers, primarily PowerEdge 1950 rack-based models. It uses NAS to host vast repositories of seismic and other 3D data. This amounts to multiple terabytes and is expanding constantly. Fortunately, that data is available on DVD so it does not tie up IT in backup administration.

"Our primary backup needs are for our financial, purchasing, file sharing, and email systems," says Stubbs. "As all of our remote sites work through us, we only have to back up one location."

VAALCO packages its backup schedules so different systems are addressed on different nights. This makes things easier to manage and avoids the necessity of extended backup windows. Some systems, such as financials, are backed up each night, whereas others are backed up weekly.

Problematic Backups

Prior to adopting Asigra, VAALCO struggled to manage its tape backup environment. "With the volume of data expanding rapidly, we found it hard to keep track of everything," says Stubbs. "Juggling tapes proved troublesome and cumbersome due to the manual processes we employed. It took the attention of two people to make sure everything kept flowing."

While that situation had the organization looking to upgrade, the impetus behind the switch eventually came in the form of recent legislation. Sarbanes-Oxley requires companies such as VAALCO to store key info for years. Traceability of backups is just one of Sarbox's many points. The company, for example, has to be able to demonstrate to auditors that its backups are complete, that they have not been tampered with, and that they contained valid financial data. The manual tape system didn't meet the requirements, so VAALCO searched for a certified offsite facility.

The Big Decision

The energy company looked at three vendors. But as a compliance deadline loomed, it had no time to lose. It selected NetMass because its services met all requirements and it was impressed with that vendor's timeliness and overall responsiveness.

NetMass specializes in automated backup and recovery service for organizations of all sizes. It provides reliable data protection for a company with few or no IT staff. Asigra provides this disk-to-disk backup software. NetMass has centers in Dallas, McKinney, and Houston and uses fiber-optic networks.

"Our data is encrypted and compressed and transmitted over the Internet to a secure auditable facility," says Stubbs. "If we need to restore, it can be accomplished in less than 15 minutes."

Asigra backs up about 40GB a week from the email system, about 10GB for accounting, 5GB procurement, and around 1GB of miscellaneous material. These numbers represent compressed figures, as the software compresses data to speed up transmission.

"Backup administration took us up to four man-hours a day, and now we only need a few minutes to verify the reports," says Stubbs. "Even if the entire facility went up in flames, we could go offsite, download our data onto new hardware, and be up and running rapidly."

Features

Asigra Managed Backup Services comes with a wealth of features. Besides backup and restore, it includes encryption, a robust compression engine, and extensive reporting. Stubbs likes the fact that it is a clean, light piece of software that interacts with the company servers seamlessly and required no additional hardware. In fact, it took up so little space that he could install it on an existing server. He completed the installation within two days without serious problems.

One weakness did crop up, however. The entire system hinges upon Web performance. If there is a networking issue outside the control of VAALCO, no backups can be completed. "The major weakness in our automated backup environment is its reliance on an Internet connection," says Stubbs. "If something is wrong with the Internet, that backup is not going offsite."

When this challenge cropped up, VAALCO contacted NetMass. Technicians from the firm pointed out that the Asigra software contained capabilities that could be used to get around this difficulty. As a result, they set up a local buffer so that if the backup can't go offsite, it is sent to a buffer. From there, the system continues to poll the offsite location until it establishes communication. Then the backup takes place.

"This feature was already there in the Asigra software, but we weren't aware of it," says Stubbs. "NetMass came up with the solution, and the problem was solved to our satisfaction."

Asigra Managed Backup Services

Streamlines and simplifies backup and recovery

"Backup administration took us up to four man-hours a day, and now we only need a few minutes to verify the reports," says Dereck Stubbs, an IT specialist at VAALCO. "Even if the entire facility went up in flames, we could go offsite, download our data onto new hardware, and be up and running rapidly."

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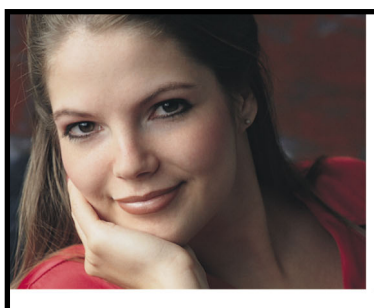

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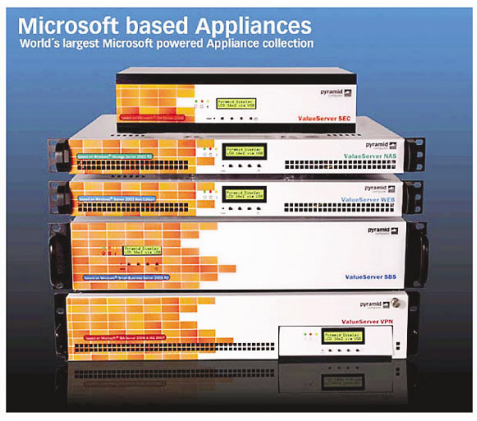

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Solid State Disks: Costs, Sizes & Other Issues

Are Traditional Disks Obsolete?

by Sixto Ortiz Jr.

• • •

COULD TRADITIONAL HARD DRIVES be about to suffer the same fate as the floppy diskette? Floppy diskettes were once a ubiquitous method of storing data; nowadays, it's difficult to find a computer or laptop with a floppy drive.

Today, solid-state disks, or SSDs, are rapidly gaining ground as a viable storage technology and an alternative to traditional hard disk technology. Even though SSDs today are more expensive and have smaller capacities than their larger hard disk brethren, one thing is certain: They will get better. So, is SSD technology worth keeping your eye on as a potential storage technology with real advantages? Or, are hard disks' current capacity and cost advantages too large to overcome?

No Moving Parts = Advantage SSDs?

SSD proponents point out that the Achilles' heel of modern HDDs (hard disk drives) is the fact that they still use mechanical parts—rotating platters and read/write heads—to get the job done. So, access times for an HDD are determined by physical limitations, such as the time it takes for a platter to spin to the desired location (rotational latency) and the time it takes for a read/write head to move to the desired location (seek latency). The sum of these two times equals the access time for an HDD.

According to findings from Solid Data Systems (www.soliddata.com), today's fastest HDDs have access times totaling 4 milliseconds. Seems like quite a short time, but when you consider the fact that RAID systems are the storage cornerstone of modern business applications that rely on transaction volume to perform effectively, any bottleneck results in real performance hits (and real dollars lost).

SSDs, by their very nature, contain no moving parts. So, says Wade Tuma, CEO of Solid Data Systems, "DRAM drives are low latency, which dramatically improves application throughput per server." SSDs feature access times in the 10-microsecond range, roughly 500 times faster than HDD access times, according to findings documented in a whitepaper by Solid State Systems. These faster access times pay dividends when used with high-transaction systems, such as corporate databases, because faster access times mean database servers can process more transactions per unit time.

But, adds Tuma, it's important to note that these performance figures apply to SDRAM-based drives and not flash drives, which are limited in write performance and may not be faster than rotating disks on random writes.

In fact, says Solid Data Systems' Tuma, when measured in terms of price per transaction, SSDs are already cheaper than traditional HDDs. So, says Tuma, measuring performance in terms of cost per byte is unrealistic for SSDs because this metric does not take into account the cost advantages that SSDs bring to the table when used in high-transaction rate systems.

SSD Shortcomings

According to Cheen Liao, president of Synology (www.synology.com), SSDs have relatively slower write speeds due to the fact

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Solid-State Disks vs. Hard Disk Drives

SSDs (solid-state disks)

Advantages

- No moving parts (potentially faster and less chances for mechanical failure)
- Lighter (but not by much)
- Less noisy
- SDRAM-based SSDs better for high-volume transactions

Disadvantages

- Less capacity than HDDs
- More expensive (in terms of cost per byte)
- Less read/write cycles over lifetime (for NAND flash storage)
- Relatively slower write speeds than HDDs
- Higher manufacturing costs

HDDs (hard disk drives)

Advantages

- More established in marketplace
- Work well with modern file systems
- Cheaper (in terms of cost per byte)
- Larger capacities that continue to grow

Disadvantages

- Moving parts that limit access times and are prone to failure
- Limiting factor for high-transaction-volume applications
- Less expensive manufacturing keeps cost structure lower

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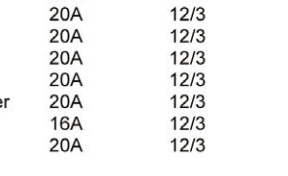

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4663	1.5 foot	10A	18/3
1736	2 foot	10A	18/3
7691	2.5 foot	10A	18/3
5413	3 foot	10A	18/3
1775	3.5 foot	10A	18/3
2965	4 foot	10A	18/3
1778	4.5 foot	10A	18/3
3262	5 foot	10A	18/3
9160	5.5 foot	10A	18/3
5612	6 foot	10A	18/3
3220	6.5 foot	10A	18/3
1228	7 foot	10A	18/3
2986	8 foot	10A	18/3
4671	1 foot	13A	16/3
4403	1.5 foot	13A	16/3
4670	2 foot	13A	16/3
4142	1 meter	13A	16/3
8037	4 foot	13A	16/3
2832	6 foot	13A	16/3
7365	1 foot	15A	14/3
4962	1.5 foot	15A	14/3
1965	2 foot	15A	14/3
7231	1 meter	15A	14/3
1529	4 foot	15A	14/3
7415	5 foot	15A	14/3

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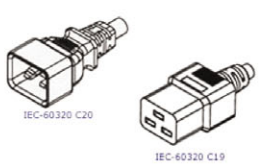

Item	Length	Amps	Gauge
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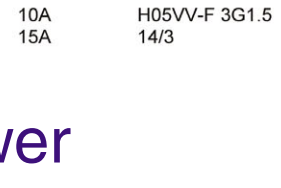
3101	2 foot	20A	12/3
2992	3 foot	20A	12/3
3002	4 foot	20A	12/3
7784	5 foot	20A	12/3
2928	6 foot	20A	12/3
1007	2.5 meter	20A	12/3
7995	3 meter	16A	12/3
3779	3 meter	20A	12/3

AC Power Cord IEC 60320 C14 Plug to C19 Connector 250v Black



Item	Length	Amps	Gauge
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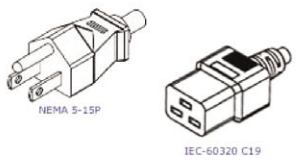
9430	2 foot	15A	14/3
6201	3 foot	15A	14/3
9429	4 foot	15A	14/3
6154	4.5 foot	15A	14/3
9428	5 foot	15A	14/3
4586	6 foot	15A	14/3

AC Power Cord NEMA 5-15P Plug to C19 Connector 125v Black



Item	Length	Amps	Gauge
8788	2 foot	15A	14/3
8826	3 foot	15A	14/3
9118	5.5 foot	15A	14/3
1409	8 foot	15A	14/3
8723	14 foot	15A	14/3

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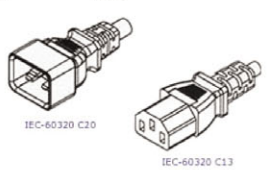

Item	Length	Amps	Gauge
9509	1 meter	15A	14/3
8047	2 meter	15A	12/3
9157	2 meter	15A	14/3
4177	6 foot	10A	H05VV-F 3G1.5
9183	6 foot	15A	14/3

AC Power Cord NEMA 5-15P Plug to C13 Connector 125v Black

Item	Length	Amps	Gauge
5917	1 foot	10A	18/3
3862	15 inch	10A	18/3
2996	1.5 foot	10A	18/3
1092	2 foot	10A	18/3
3858	3 foot	10A	18/3
7232	4 foot	10A	18/3
1063	5 foot	10A	18/3
6085	6 foot	10A	18/3
8797	7.5 foot	10A	18/3
4680	8 foot	10A	18/3
4679	10 foot	10A	18/3
5444	12 foot	10A	18/3
2966	15 foot	10A	18/3
3581	20 foot	10A	18/3
1394	25 foot	10A	18/3
7983	1.5 foot	13A	16/3
3284	2 foot	13A	16/3
8778	1 meter	13A	16/3
1597	3 foot	13A	16/3
6755	4 foot	13A	16/3
8829	5.5 foot	13A	16/3
8779	2 meter	13A	16/3
2889	6 foot	13A	16/3
7853	8 foot	13A	16/3
8780	3 meter	13A	16/3
7238	10 foot	13A	16/3
7534	20 foot	13A	16/3
3268	1 foot	15A	14/3
2133	1.5 foot	15A	14/3
3267	2 foot	15A	14/3
8612	1 meter	15A	14/3
8874	3 foot	15A	14/3
1795	4 foot	15A	14/3
8831	5 foot	15A	14/3
8605	2 meter	15A	14/3
2888	6 foot	15A	14/3
1924	8 foot	15A	14/3
8611	3 meter	15A	14/3

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Electrical Backup In The SME

How Much Redundancy Is Enough?

by Curt Harler

• • •

TODAY'S 24/7 DEMANDS on enterprise servers require that small to midsized enterprises have reliable electricity. In case of disaster, a backup electrical source is important. Forget about storms such as Hurricane Katrina. If your area gets nailed with a storm of that magnitude, your operations are toast. But there are a host of smaller disasters—an overnight ice storm, a truck hitting a transformer, a daydreamer on a backhoe—that can cost your data center its power for up to several hours.

The amount of redundancy is determined by the level of availability the application requires, says Bob Woolley, director of technical quality management at Lee Technologies (www.leetechnologies.com). "High-availability applications need multiple levels of redundancy and vice versa," he says. "Availability is driven by the criticality of the application, most often measured in the cost of downtime."

"There is no simple answer regarding the need for electrical redundancy," agrees Brad Amano, business development manager, power quality, of MGE UPS SYSTEMS' Office Protection Systems (www.mgeups.com). "The need for redundancy is based upon the nature of the business and the criticality of the applications. This can vary greatly between a 24/7/365 operation, which is highly dependent on technology—say, an ISP or a call center—and a situation that involves more manual processes," Amano says. "These variables determine the cost of downtime associated with different businesses."

In short, if yours is an SME with computing requirements that absolutely cannot stop running, the cost of downtime will far outweigh the cost of electrical backup. However, the company's general email or accounting systems should be able to tolerate a minute of downtime now and then.

If yours is an SME with computing requirements that absolutely cannot stop running, the cost of downtime will far outweigh the cost of electrical backup.

The need for redundancy is also based upon the standards established by the SME. This is expressed in terms such as "five nines," which indicates that a system is up and running 99.999% of the time. This is the level of reliability found in the standard telephone network. To achieve this system availability, an SME must have a specific strategy for its systems architecture.

The parameters for time and power are highly dependent on the mission-critical applications. "If the connected equipment is a point-of-sale device and it simply needs to close out a transaction before shutting down, then time and power are low but extremely important in maintaining system integrity," Amano says. In a manufacturing environment, time and power requirements may involve the completion of a full machine cycle, particularly if a midcycle shutdown will create several additional hours of downtime due to cleaning, recalibration, and equipment preparation. The computers supporting the process must be able to function well beyond that time frame.

Providing Power

A recent study by Stanford University's Jonathan Koomey shows data center equipment and infrastructure energy consumption in the United States totaled $2.7 billion in 2005 (the most recent year studied) and $7.2 billion worldwide. All of that power needs to be backed up in case of failure.

Power protection can be provided centrally, distributed, or both. For a seamless transition to backup power, Amano recommends a combination of UPSes and generators for the entire enterprise as the ultimate solution but acknowledges that this strategy will incur a significant capital outlay. "In order to balance the cost of backup with the cost of downtime, it is critical to evaluate the individual systems within the enterprise," Amano says. "Centralized power protection can be provided for a short period in order to accommodate orderly shutdowns and distributed power protection. Extended runtime UPSes or a combination of UPSes and generators can be provided only to the critical systems required to conduct the basic operations of the business and avoid incurring unnecessary costs or losing revenue or credibility," he says.

Woolley notes that an SME should consider buying the expertise rather than the equipment. It can place its high-availability applications (such as Web commerce) with a hosting company if it cannot afford the

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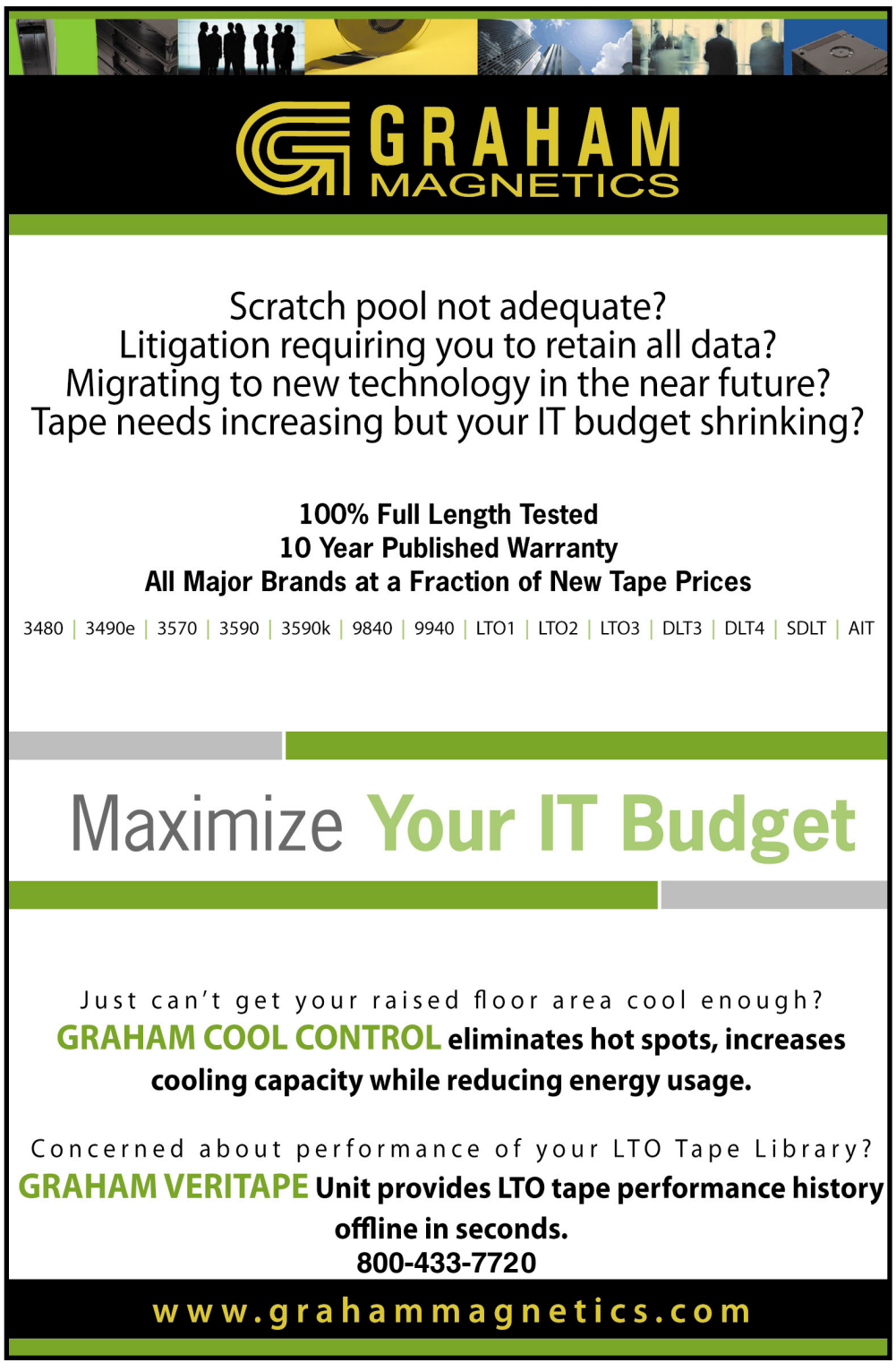
The Cost Of Reliability

Any backup system has its initial capital cost. However, the operational cost of keeping the backup system running must be budgeted, too. Maintenance is a big part of that cost.

If you are pushing a pencil on those operating costs, Bob Woolley, director of technical quality management at Lee Technologies (www.leetechnologies.com), says a good rule of thumb for ongoing maintenance with a standby generator is about $3,600 per megawatt. For the truly mission-critical application, that is a small price to pay for business continuity.



Solid State Disks: Costs, Sizes & Other Issues

Continued from Page 24

that current file systems are not designed to take advantage of SSDs. So, adds Liao, "file systems are needed to adapt to SSDs." Today, says Liao, capacity and write speed are the main concerns surrounding SSDs.

Western Digital (www.westerndigital.com), a manufacturer of HDDs and other storage devices, is not convinced that SSDs are a tidal wave about to sweep HDDs away from the storage landscape.

"We believe," says Steve Shattuck with Western Digital, "that much of the chatter about solid-state disks [SSDs] has been presented without a solid, lab-tested foundation."

For example, he adds, SSD proponents have pointed out that SSDs are lighter, quieter, sturdier, and more energy-efficient than HDDs. But, Shattuck points out, Western Digital's comparisons have indicated that SSDs are lighter than HDDs by only 15 grams. And, while Western Digital concedes SSDs are indeed quieter, Shattuck points out that HDDs in notebooks, for example, are nearly inaudible and produce about 22dBA of noise.

In terms of energy efficiency, adds Shattuck, SSDs and HDDs both do not use significant amounts of energy—such as notebook battery power—to make a significant difference. And in terms of reliability, he says, NAND flash-based SSD technology can only achieve about 100,000 read/write cycles, a stark contrast to the 10 quadrillion cycles HDDs can achieve over their lifetimes.

"It will be interesting," says Shattuck, "to see how SSDs perform over time in computing applications."

The Future

Today, SSDs are more expensive and have less capacity than traditional HDDs. But, is that about to change, and if so, how soon?

According to Shattuck, "Western Digital does not believe that the significant hard drive capacity-per-cost advantage over SSDs will change dramatically over the next few years, especially with mainstream hard drive form factors, including 3.5-inch and 2.5-inch." Also, he adds, hard drive densities are growing at solid rates (at least 40% per year), and high-capacity storage is in greater demand than ever before with new applications such as video, music, and photography.

According to Solid Data Systems' Tuma, solid-state disks and hard drives will both continue to get cheaper, so pricing is not likely to even out. But, he adds, price per byte should not be the metric used to compare SSDs to HDDs because SSDs are already cheaper when measured in terms of price per transaction.

"SDRAM-based disks," says Tuma, "are the best way to increase transaction performance and to prevent server overload during peak periods. So, they are a lifesaver in high-transaction-rate apps."

In the future, he says, SSDs and disks will co-exist much as disks still co-exist with tape. But, Tuma predicts, SSDs will ". . . sit at the peak of the storage hierarchy."

The Bottom Line

One thing's for sure: SSDs are here to stay and will become a viable and valid alternative for storage. But, one technology will not completely supplant the other in the data center; instead, both will co-exist as administrators deploy SSDs under certain circumstances and stick with HDDs under others. Data center administrators should review their needs and deploy SSDs where they bring the most value. In some cases, it may be wise to wait for SSD technology to catch up in terms of both capacity and cost.

Electrical Backup In The SME

Continued from Page 25

required infrastructure. Otherwise, he says, the normal amount of redundancy for a mission-critical application is n+1 (the amount needed for full load plus one unit).

Use of a secondary electrical source simply provides an additional level of redundancy for the enterprise and preserves the UPS and generator power to guarantee power availability in the unlikely event of the loss of the secondary source.

Dual Grids?

Phone lines often are set up to access different central offices to assure uptime. In some cases, an enterprise can tap into a second electrical grid to guarantee against loss of power. While there are several ways to address this issue, most involve significant investments in infrastructure—investments that are beyond reality for SMEs.

"There are some opportunities with phone lines and Ethernet lines, but there are definitely limitations to the amount of power and distance which can be accommodated," Amano says. He says that such a solution is likely not cost-effective for the SME space, but it depends on the expectations for uptime.

Woolley agrees that redundant electrical grids are not necessary for the vast majority of applications. "That would be considered impractical from an ROI standpoint for most SMEs," he says.

In fact, few locations have the luxury of multiple electrical grids in the immediate vicinity. "Even when available, it is expensive to have additional electrical service installed. True redundant electrical grids are a rarity in the industry and are typically found only in very high-end applications," Woolley says.

Adding It Up

Woolley says there is no reason to go overboard with systems unless there is a compelling reason to get generators that provide long-term power. "A standby generator is a backup electrical source," he notes. "Most enterprises can achieve high levels of availability with a UPS/standby generator setup."

With today's facility or large data center systems, Amano says it is typical to find the cost of service contracts to provide scheduled preventive maintenance and battery maintenance is about equal to the initial acquisition costs.

"With smaller UPSes in a distributed architecture, there are generally fewer maintenance costs and considerations," Amano says. "The key maintenance cost with these units is the cost of battery replacements every three to five years in order to ensure optimum performance."

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WHAT'S HAPPENING

Core Makes An Impact

Information Security Company Helps SME Protect What's Important

by Don Reisinger

• • •

IN AN AGE WHERE a company's data security is constantly being put into question, there are typically two constants: an IT manager who is charged with the task of protecting the firm's important information and a host of security "solutions" that claim to be the best source for total SME protection. That said, some security firms are successful in bringing data center managers the solutions they need to protect sensitive information. One such company is Core Security Technologies (www.Processor.com/CoreSec).

The Core Business: CORE IMPACT

As Max Caceres, director of product management at Core Security Technologies, points out, his employer "was the first company to successfully create the first commercial-grade product that allows organizations to safely use actual attacker methodologies in real-world attack scenarios."

This product, known as CORE IMPACT, "is an automated penetration-testing product that enables a data center manager to actively exploit vulnerabilities within a network by replicating the kinds of access an intruder could achieve in a real attack." Besides this, CORE IMPACT enables administrators to identify what resources are exposed and to determine if security investments are successfully detecting and preventing attacks.

The Core Security Technologies research and development division is split into two teams: one group that focuses on developing completely new products and another team that helps improve existing products. Currently, the company is focusing its efforts on the CORE IMPACT brand, introducing new options and features for the product.

Dating back to 2004, the CORE IMPACT system has seen a number of improvements and alterations. Three years ago, Core Security released the first update to the system, currently called Rapid Penetration Testing. This process effectively allows data center managers to test the security of their infrastructure without needing to perform a manual test. The Rapid Penetration Testing feature gives data center managers a step-by-step guide on how to check their systems and ensure security. But it is the center of this application that foretells the future of Core Security: automation. Without the need for constant interaction with the system, data center managers are not only more capable of performing more important tasks as CORE IMPACT is running, but overall job efficiency can be maximized.

In response to new attacks, Core Security has constantly updated both the CORE IMPACT system and its Rapid Penetration Testing application. Just this past year, the company released an update to further simplify penetration testing for data center managers and continue its trek toward full automation. Realizing an IT manager's time is valuable and limited at best, the company streamlined the somewhat lengthy step-by-step automation process and added new features, such as phishing recognition, to help data center managers assess their companies' risks.

Looking Ahead

Core Security Technologies is keenly aware of the future threats all data center managers will face. The main focus of the company is to monitor the methods malicious hackers are currently using to attack businesses and understand these techniques as well as possible. Upon fully understanding the methods hackers use to worm their way into enterprise systems, Core Security attempts to mimic these methods and incorporate them into CORE IMPACT. Once the company has improved the system and defined a significant number of new attacks that the current version does not address, it will typically release an update. It is this daily struggle for knowledge and understanding that Core Security Technologies is focusing on for the future.

Although the company does not have any new products coming soon, its focus is squarely on maximizing the usefulness and efficiency of its CORE IMPACT system. As Caceres points out, "[Core Security's] technical experts are continually researching emerging threats and writing safe exploits that reflect the latest hacker techniques. . . . [Our] strength in developing exploits has earned us great respect in the world of security researchers and has put the company's exploit developers in demand for teaching others how to write exploits."

As Caceres explains, Core Security Technologies' main competitors are "third-party consultants who use proprietary and publicly available software for penetration testing." But, he notes, this option is "expensive" and "testing effectiveness depends on the skill of the tester, not the quality of the tools." But possibly the most harmful effect of hiring a third-party security firm, according to Caceres, is that most companies can only afford to bring these firms in "once or twice per year." The infrequency with which security firms evaluate a company's security could easily leave a company defenseless for months against new types of attacks.

An obvious competitor to Core Security Technologies is the significant number of vulnerability-scanning products that are available on the market. These products quickly and easily scan a company's network and examine possible problem areas. Unfortunately, these products do not adequately address the issue of what a data center manager could do to ward off a successful attack like CORE IMPACT does. Even worse, Caceres explains, "vulnerability scanners only list what the potential vulnerabilities are and do not probe deeper to reveal the true threats they pose to assets when they are exploited."

Perhaps the most cost-effective and robust alternative to CORE IMPACT is an open-source penetration testing application. This type of product is not only free to use, but its source code is readily available and editable so you can tailor it to your own company's needs. CORE IMPACT is a closed-source product that is uniquely qualified to address many issues for companies both big and small. Open-source products give data center managers the ability to modify the program in a way that would make it more realistic for company use. But, its code is freely available to both data center managers and hackers. With both groups having access to the same code, Caceres believes it "defeats the purpose of seeking to fortify the safety of the network in the first place."

Core Security Technologies has developed the first penetration-testing platform that promises better security and improved understanding of the issues an enterprise's network may face. With the help of CORE IMPACT, data center managers in SMEs can quickly and efficiently garner a significant amount of information about how well their companies' data is protected. Core Security is focused on continually improving CORE IMPACT in order to stay ahead of the competition it faces.

THREE QUESTIONS

Certified Used Tapes Save Money

Tape Media Manufacturer Turns To Recycling Media

by Daniel Dern

Founded in the mid-1960s, Graham Magnetics (www.grahammagnetics.com) was one of the first manufacturers of tape media for the computer storage industry.

Today, as part of electronic discovery and data restoration company eMag Solutions (www.emaglink.com), the Graham Magnetics division provides products, including its Graham Certified used media, and services that help companies purge data from their tape media inventory so they can reuse, sell, or dispose of them without risk of data exposure, according to Marvin Howell, general manager of the Graham Magnetics division. "We don't manufacture tape anymore," notes Howell.

Howell has been with Graham Magnetics for 33 years. "I was the 10th hire," he says. During this time, Howell has been district manager in southern California, product manager for media, and managing director of a European subsidiary.

■ What are the biggest IT-related issues facing today's small to midsized enterprise?

"One: How do I back up all the data I have in the time frame I have?" according to Howell. "Backup windows are getting shorter, and the amount of data is getting greater."

Another big issue, Howell says, is having the appropriate amount of cooling in data centers, as data centers bring equipment in and out—not too little or too much.

Third, as a consequence of both, "How do I pay for it all—backup systems and media, cooling, and other IT concerns, with all IT's budget constraints?"

■ What should *Processor* readers know about your company's products?

"Graham Certified," Howell explains, "means we certify that the data that was on the tapes has been erased to a level that meets compliance requirements—it can't be recovered. And we're also certifying that the condition of tapes is as good as new . . . or we won't sell them. We assume the warranty—we put our name and a date code and back a tape for 10 years." Generally, notes Howell, companies can save 30 to 40% by buying Graham Certified media vs. buying new tapes.

Graham Magnetics is also quickly building its service side, says Howell. "It will probably surpass media sales in the next few years." For example, "Our Intelligent Asset Management Program can 100% eradicate the data on a company's tapes, such as old tapes containing sensitive data, without damaging the tapes or the servos guide tracks," Howell explains. "So the tapes still have value to the user—they can be reused or resold. And the resale value of tapes normally exceeds the cost of data eradication, so it becomes a form of asset recovery rather than a cost for someone to come and destroy them. We will even go onsite to perform the data erasure."

Other products from Graham Magnetics include Graham Cool Control which, says Howell, "lets companies that have raised-floor data centers and computer rooms reduce their cooling costs by 30 to 40% without using any more energy."

■ What makes your company unique?

"We are the only company in this business that has also been a tape manufacturer," states Howell. "Our Texas plant is 130,000 square feet, which is very big. This means we have a lot of technical expertise and equipment and a unique understanding of what's involved in making quality tape cartridges. And we handle the full product line of tapes—virtually every kind of tape out there. Some of our competition may be more restricted in what they offer."

Additionally, Howell says, "We test every single cartridge and certify it. There are other companies in the recycled tape business, but their processes are very different from ours. I've never seen another company issue the same guarantees that we do."

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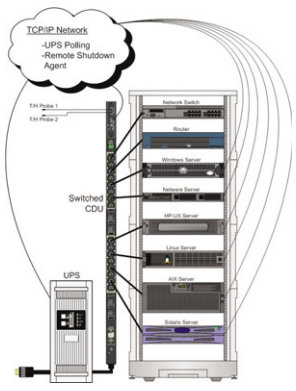

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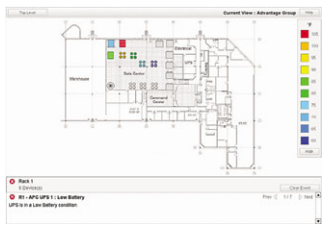

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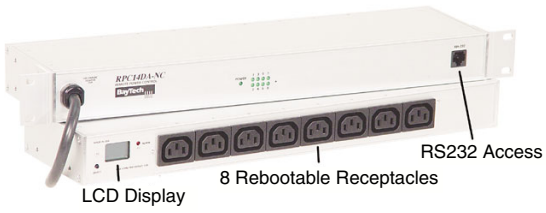

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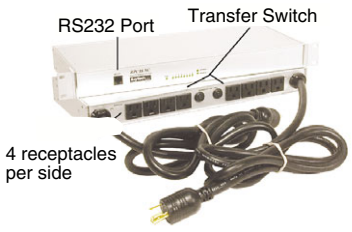

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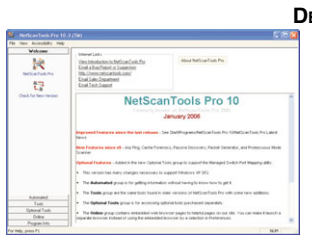

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